



MIAMI-DADE COUNTY
PRODUCT CONTROL SECTION
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DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES (RER)
BOARD AND CODE ADMINISTRATION DIVISION

NOTICE OF ACCEPTANCE (NOA)

Firestone Building Products Company, LLC
250 West 96th Street
Indianapolis, IN 46260

SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed and accepted by Miami-Dade County RER - Product Control Section to be used in Miami-Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Section (in Miami-Dade County) and/or the AHJ (in areas other than Miami-Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. RER reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Section that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein, and has been designed to comply with the Florida Building Code including the High Velocity Hurricane Zone of the Florida Building Code.

DESCRIPTION: Firestone UltraPly TPO & TPO XR Single Ply Roof Systems over Concrete Decks.

LABELING: Each unit shall bear a permanent label with the manufacturer's name or logo, city, state and following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

RENEWAL of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

TERMINATION of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

ADVERTISEMENT: The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

INSPECTION: A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This NOA revises NOA No. 12-0514.03 and consists of pages 1 through 94.

The submitted documentation was reviewed by Gaspar J Rodriguez.



NOA No.: 15-0224.10
Expiration Date: 05/18/16
Approval Date: 10/29/15
Page 1 of 94

ROOFING SYSTEM APPROVAL

Category:	Roofing
Sub-Category:	Single Ply Roofing
Material:	TPO
Deck Type:	Concrete
Maximum Design Pressure	-500 psf.

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:
TABLE 1

<u>Product</u>	<u>Dimensions</u>	<u>Test Specifications</u>	<u>Product Description</u>
UltraPly TPO	Various	TAS 131-95	Reinforced TPO 0.045" to 0.080" thick membrane
UltraPly TPO XR 100	Various	TAS 131-95	Reinforced TPO
UltraPly TPO XR 115	Various	TAS 131-95	Reinforced TPO
UltraPly TPO Reinforced Curb Corner	Various	TAS 131-95	TPO curb flashing
UltraPly 18" Curb Flashing	Various	TAS 131-95	TPO curb flashing
UltraPly TPO Inside/Outside Corner	Various	TAS 131-95	Molded TPO for corner flashing
UltraPly TPO Large Pipe Flashing	Various	TAS 131-95	TPO flashing for large round penetrations
UltraPly TPO T-Joint Cover	Various	TAS 131-95	TPO flashing for T-joints
UltraPly TPO Penetration Kit	Various	TAS 131-95	A penetration sealing kit for UltraPly TPO
UltraPly TPO Walkway Pad	Various	TAS 131-95	TPO walkway pad
UltraPly TPO Coated Metal	Various	TAS 131-95	TPO laminated to hot-dipped galvanized steel for flashing
UltraPly TPO Premium Walkway Pad	Various	TAS 131-95	TPO walkway pad
UltraPly TPO Reinforced Split Pipe Boot	Various	TAS 131-95	TPO flashing for round penetrations 1" to 9" in diameter
UltraPly TPO 8" Reinforced Cover Strip	Various	TAS 131-95	8" wide 60 mil TPO cover strip
UltraPly TPO Universal Pipe Boot	Various	TAS 131-95	TPO flashing for round penetrations 1" to 6" in diameter
UltraPly TPO Unsupported Flashing	Various	TAS 131-95	Unreinforced TPO used for flashing
TPO QuickSeam Flashing	5-3/4" x 100'	TAS 131-95	Flashing material with pre-applied adhesive



UltraPly QuickSeam R.M.A. Strip	10" x 100'	Proprietary	Strip of UltraPly TPO with QuickSeam Tape for anchoring membrane to substrate
Single-Ply QuickPrime Primer	1 gallon & 3 gallon	Proprietary	Primer for TPO QuickSeam Flashing
EdgeGard System	Various	Various	Flashing materials and assemblies
MB Base Sheet M	39.4" x 98.7' (1 m x 30.1 m)	ASTM D 4601	Fiberglass reinforced base sheet, asphalt coated on both sides.
MB Base SA	39.4" x 99.7'	ASTM D 5147	Fiberglass reinforced base sheet, asphalt coated on both sides with a plastic release film on the underside.
SBS Base	3.3" x 50'	ASTM 6163	Fiberglass reinforced SBS base sheet
SA Primer	5 gal.	Proprietary	Polymer based primer.
SBS Poly Torch	39.4" x 33'6"	ASTM D 6222	Polyester reinforced modified bitumen membrane. Torch applied.
SBS Glass Torch Base	39.4" x 33'10"	ASTM D 6163	Modified bitumen base sheet with a burn-off film and reinforced with non-woven fiberglass mat.
XR Bonding Adhesive	5 gal. pail	Proprietary	Solvent based adhesive
UltraPly Bonding Adhesive	5 gal. pail	Proprietary	Solvent based adhesive
XR Stick Membrane Adhesive	5 gal. pail	Proprietary	A low-rise polyurethane, low VOC, membrane adhesive.
I.S.O. Stick	5 gal & 1500 ml	Proprietary	A dual component polyurethane adhesive.
I.S.O. Twin Pack Insulation Adhesive	1500 ml	Proprietary	A dual component polyurethane adhesive.
I.S.O. Fix II	30 lbs.	Proprietary	A single component polyurethane adhesive.



APPROVED INSULATIONS:

TABLE 2

Product Name	Product Description	Manufacturer (With Current NOA)
ISO 95+ GL, ISO 95+ GL Tapered	Polyisocyanurate foam insulation	Firestone Bldg. Products
ISOGARD HD	Polyisocyanurate with a coated fiberglass facer	Firestone Bldg. Products
ISOGARD HD Composite	Polyisocyanurate with a coated fiberglass facer composite insulation.	Firestone Bldg. Products
DensDeck, DensDeck Prime	Silicon treated gypsum	Georgia Pacific Gypsum LLC
RESISTA	Polyisocyanurate foam core laminated to a coated fiberglass facer	Firestone Bldg. Products



APPROVED FASTENERS:

TABLE 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
1.	Heavy Duty Fastener	#15 Fastener for steel, Wood, concrete decks	N/A	Firestone Bldg. Products
2.	All Purpose Fastener	#14 Fastener for steel, Wood, concrete decks	N/A	Firestone Bldg. Products
3.	2-3/8" Barbed Seam Plate	Membrane seam attachment plate	2-3/8" diameter	Firestone Bldg. Products
4.	Pre-Assembled fastener & plate	#14 w/insulation plate for steel, Wood, concrete decks	N/A	Firestone Bldg. Products
5.	Pre-Assembled Heavy Duty fastener & plate	#15 w/insulation plate for steel, Wood, concrete decks	N/A	Firestone Bldg. Products
6.	HD HailGard Fastener	Insulation and membrane fastener	Various	Firestone Bldg. Products
7.	Insulation Fastening Plate	Galvalume insulation plate	3" diameter	Firestone Bldg. Products
8.	Concrete Drive Fastener	Structural concrete fastener	Various	Firestone Bldg. Products
9.	Heavy Duty Plus Fastener	Insulation and membrane fastener	Various	Firestone Bldg. Products
10.	HD Seam Plates	AZ55 or AZ50 galvalume insulation plate.	2-3/8" diameter	Firestone Bldg. Products
11.	HD Plus Seam Plate	Galvalume insulation plate	2 3/4" diameter	Firestone Bldg. Products
12.	Metal Batten Bar	Galvalume AZ55 batten strip	10' long, 1" wide	Firestone Bldg. Products
13.	Coiled Metal Batten Bar	Galvalume AZ55 batten strip	220' long, 1" wide	Firestone Bldg. Products
14.	Polymer Batten Strips	Polymer, corrosion –free, batten strip.	250' long, 3/4" or 1" wide	Firestone Bldg. Products
15.	UltraPly TPO InvisiWeld Plates	High-performance TPO membrane fastening system		Firestone Bldg. Products



EVIDENCE SUBMITTED:

<u>Test Agency</u>	<u>Test Identifier</u>	<u>Description</u>	<u>Date</u>
Underwriters Laboratories Inc.	01NK17982	UL 790	06/05/01
	00NK43467	UL 790	01/22/01
	03NK34486	UL 790	03/22/05
Factory Mutual Research Corporation	3006983	4470	02/08/00
	3004249	4470	11/03/99
	3003830	4470	05/26/99
	3001925	4470	05/24/99
	3014031	4470	07/22/02
	3014918	4470	12/17/03
	3012931	4470	04/04/04
	3016670	4470	04/29/04
	3017120	4470	04/30/04
	3020394	4470	09/03/04
	3022988	4470	01/28/05
	3019991	4470	09/20/05
	3029384	4470	06/07/10
	3027508	4470	02/07/07
	3026519	4470	12/14/06
	3030650	4470	07/10/09
	3033218	4470	08/12/08
	3014692	4470	08/05/03
	3036642	4470	10/09/09
	3032272	4470	05/22/09
	3033921	4470	01/12/09
3039133	4470	04/07/11	
3036747	4470	02/12/10	
3040535	4470	10/05/10	
3035017	4470	08/22/12	
3038546	4470	12/17/10	
3038770	4470	08/04/11	
3038191	4470	08/04/11	
3035560	4470	01/11/10	
Trinity ERD	F8300.07.08	TAS 131/ ASTM D6878	07/30/08
	F8300.11.08-R3	TAS 131/ ASTM D6878	02/25/11
	F8960.04.08	TAS 114-F/ TAS 114-D	04/15/08
	F10980.09.08	TAS 114	09/17/08
	F34280.11.10	TAS 114	11/16/10
PRI Construction Materials Technologies, LLC	FBP-054-02-04, R1	FM 4474/TAS 114 D	02/07/13
	FBP-044-02-01, R2	TAS 114 H, J	10/04/12
	FBP-054-02-05, R1	FM 4474/TAS 114 D	02/07/13



APPROVED ASSEMBLIES:

- Membrane Type:** Single Ply, TPO, Reinforced
- Deck Type 3I:** Concrete, Insulated
- Deck Description:** Min. 2500 psi structural concrete or concrete plank.
- System Type A(1):** Vapor Barrier and insulation adhered with approved adhesive; membrane fully adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

Vapor Barrier Firestone MB Base SA, self-adhered to primed concrete deck

Note: Concrete deck shall be primed with SA Primer; roller applied at a rate of 200 ft²/gallon and allowed to dry prior to application of Vapor Barrier. Insulation shall be adhered using I.S.O. Stick, applied in 3/4" – 1" wide ribbons spaced 12" o.c. or I.S.O. Twin Pack Insulation Adhesive applied in 1/2" – 3/4" wide ribbons spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL Minimum: 1.5" thick	N/A	N/A
Middle Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL Minimum: 1.5" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISOGARD HD Minimum: 1/2" thick	N/A	N/A
ISOGARD HD Composite Minimum: 2" thick	N/A	N/A

Membrane: UltraPly TPO membrane fully adhered to the top insulation layer with UltraPly Bonding Adhesive applied to both the substrate and the underside of the roof cover for a combined rate of 120 ft²/gal. The roof cover side and end laps are sealed with a minimum 1.5 in. heat weld.

Maximum Design Pressure: -90 psf. (See General Limitation #9)



Membrane Type: Single Ply, TPO, Reinforced
Deck Type 3I: Concrete, Insulated
Deck Description: Min. 2500 psi structural concrete or concrete plank.
System Type A(2): Vapor Barrier and insulation adhered with approved adhesive; membrane fully adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

Vapor Barrier MB Base SA, self-adhered to primed concrete deck

Note: Concrete deck shall be primed with SA Primer; roller applied at a rate of 200 ft²/gallon and allowed to dry prior to application of Vapor Barrier. Insulation shall be adhered using I.S.O. Stick applied in ¾” – 1” wide ribbons spaced 12” o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL Minimum: 1.5” thick	N/A	N/A
Middle Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL Minimum: 1.5” thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
DensDeck, DensDeck Prime Minimum: ¼” thick	N/A	N/A

Membrane: UltraPly TPO membrane fully adhered to the top insulation layer with UltraPly Bonding Adhesive applied to both the substrate and the underside of the roof cover for a combined rate of 120 ft² /gal. The roof cover side and end laps are sealed with a minimum 1.5 in. heat weld.

Maximum Design Pressure: -90 psf. (See General Limitation #9)



Membrane Type: Single Ply, TPO, Reinforced
Deck Type 3I: Concrete, Insulated
Deck Description: Min. 2500 psi structural concrete or concrete plank.
System Type A(3): Vapor Barrier and insulation adhered with approved adhesive; membrane fully adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

Vapor Barrier MB Base SA, self-adhered to primed concrete deck

Note: Concrete deck shall be primed with SA Primer; roller applied at a rate of 200 ft²/gallon and allowed to dry prior to application of Vapor Barrier. Insulation shall be adhered using I.S.O. Twin Pack Insulation Adhesive, applied in 1/2" to 3/4" wide ribbons spaced 8" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL Minimum: 1.5" thick	N/A	N/A
Middle Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL Minimum: 1.5" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISOGARD HD Minimum: 1/2" thick	N/A	N/A
DensDeck, DensDeck Prime Minimum: 1/4" thick	N/A	N/A

Membrane: UltraPly TPO membrane fully adhered to the top insulation layer with UltraPly Bonding Adhesive applied to both the substrate and the underside of the roof cover for a combined rate of 120 ft²/gal. The roof cover side and end laps are sealed with a minimum 1.5 in. heat weld

Maximum Design Pressure: -112.5 psf. (See General Limitation #9)



Membrane Type: Single Ply, TPO, Reinforced
Deck Type 3I: Concrete, Insulated
Deck Description: Min. 2500 psi structural concrete or concrete plank.
System Type A(4): Vapor Barrier and insulation adhered with approved adhesive; membrane fully adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

Vapor Barrier MB Base SA, self-adhered to primed concrete deck

Note: Concrete deck shall be primed with SA Primer; roller applied at a rate of 200 ft²/gallon and allowed to dry prior to application of Vapor Barrier. Insulation shall be adhered using I.S.O. Twin Pack Insulation Adhesive, applied in 1/2" to 3/4" wide ribbons spaced 8" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL		
Minimum: 1.5" thick	N/A	N/A
Middle Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL		
Minimum: 1.5" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
DensDeck, DensDeck Prime		
Minimum: 1/4" thick	N/A	N/A

Membrane: UltraPly TPO XR 100 or UltraPly TPO XR 115 fully adhered with XR Bonding Adhesive applied at a rate of 70-90 ft²/gallon or with hot asphalt applied at a rate of 20-25 lbs./sq. The roof cover laps are sealed with a minimum 1.5 in. heat weld.

Maximum Design Pressure: -112.5 psf. (See General Limitation #9)



Membrane Type: Single Ply, TPO, Reinforced
Deck Type 3I: Concrete, Insulated
Deck Description: 2500 psi or greater structural concrete or concrete plank
System Type A(5): One or more layers of insulation adhered with approved adhesive; membrane fully adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
DensDeck, DensDeck Prime Minimum ¼” thick	N/A	N/A

Note: Base insulation shall be adhered to the deck with I.S.O. Stick applied in ¾ to 1 in. wide ribbons spaced 12” o.c. All subsequent layers of insulation shall be adhered to the previous layer of insulation using I.S.O. Stick applied in ¾ to 1 in. wide ribbons spaced 12” o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: UltraPly TPO membrane fully adhered to the top insulation layer with UltraPly Bonding Adhesive applied to both the substrate and the underside of the roof cover for a combined rate of 120 ft² /gal. The roof cover side and end laps are sealed with a minimum 1.5 in. heat weld.

Maximum Design Pressure: -150 psf. (See General Limitation #9)



Membrane Type: Single Ply, TPO, Reinforced

Deck Type 3I: Concrete, Insulated

Deck Description: Min. 2500 psi structural concrete or concrete plank.

System Type A(6): One or more layers of insulation adhered with approved adhesive; membrane fully adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL Minimum 1.5" thick	N/A	N/A
Middle Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL Minimum 1.5" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISOGARD HD Minimum ½" thick	N/A	N/A

Note: All Insulation layers shall be adhered to the deck or previous layer of roof insulation with I.S.O. Twin Pack Insulation Adhesive applied in 1/2 to 3/4 in. wide ribbons spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: UltraPly TPO membrane fully adhered to the top insulation layer with UltraPly Bonding Adhesive roller applied at a rate of 60 ft²/gallon (120 ft²/gallon to both the underside of membrane and substrate). The roof cover side laps are sealed with a 1.5 in. wide heat weld.

Maximum Design Pressure: -157.5 psf. (See General Limitation #9)



Membrane Type: Single Ply, TPO, Reinforced
Deck Type 3I: Concrete, Insulated
Deck Description: Min. 2500 psi structural concrete or concrete plank.
System Type A(7): One or more layers of insulation adhered with approved adhesive; membrane fully adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL		
Minimum: 1.5" thick	N/A	N/A

Note: All Insulation layers shall be adhered to the deck with I.S.O. Twin Pack Insulation Adhesive applied in 1/2 to 3/4 in. wide ribbons spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: UltraPly TPO membrane fully adhered to the top insulation layer with UltraPly Bonding Adhesive or roller applied at a rate of 60 ft²/gallon (120 ft²/gallon to both the underside of membrane and substrate). The roof cover side laps are sealed with a 1.5 in. wide heat weld placed along the outside edge of the lap.

Maximum Design Pressure: -157.5 psf. (See General Limitation #9)



Membrane Type: Single Ply, TPO, Reinforced
Deck Type 3I: Concrete, Insulated
Deck Description: Min. 2500 psi structural concrete or concrete plank.
System Type A(8): Vapor Barrier and insulation adhered with approved adhesive; membrane adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

Vapor Barrier One ply of MB Base Sheet M, SBS Base fully adhered to the concrete deck with a full mopping of hot asphalt applied at a rate of 20 – 25 lbs./square.

One or more layers of any of the following insulations.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL Minimum: 1” thick	N/A	N/A

Note: Insulation shall be adhered using I.S.O. Twin Pack Insulation Adhesive in continuous ½” – ¾” wide beads spaced 12” o.c. or I.S.O. Fix II or I.S.O. Stick applied in continuous ¾” – 1” wide ribbons spaced 12” o.c. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density. See Roofing Application Standard RAS 117 for fastening details.

Middle Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft ²
Tapered ISO 95+ GL Minimum: ½” thick with a ¼” per ft. taper	N/A	N/A

Top Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISOGARD HD Minimum: ½” thick	N/A	N/A
DensDeck, DensDeck Prime Minimum: ¼” thick	N/A	N/A

Membrane: UltraPly TPO XR 100 or UltraPly TPO XR 115 adhered with XR Stick Membrane Adhesive applied in continuous 1” wide ribbons spaced 4” o.c. and allowed to expand to full coverage prior to placement of the roof membrane. The 2” wide roof cover side laps are sealed with a minimum 1.5 in. heat weld placed on the outside edge of the lap.

Maximum Design Pressure: -172.5 psf. (See General Limitation #9)



Membrane Type: Single Ply, TPO, Reinforced
Deck Type 3I: Concrete, Insulated
Deck Description: Min. 2500 psi structural concrete or concrete plank.
System Type A(9): Vapor Barrier and insulation adhered with approved adhesive; membrane adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

Vapor Barrier One ply of MB Base Sheet M, SBS Base fully adhered to the concrete deck with a full mopping of hot asphalt applied at a rate of 20 – 25 lbs./square.

One or more layers of any of the following insulations.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISOGARD HD		
Minimum: ½” thick	N/A	N/A
DensDeck, DensDeck Prime		
Minimum: ¼” thick	N/A	N/A

Note: Insulation shall be adhered using I.S.O. Twin Pack Insulation Adhesive in continuous ½” – ¾” wide beads spaced 12” o.c. or I.S.O. Fix II or I.S.O. Stick applied in continuous ¾” – 1” wide ribbons spaced 12” o.c. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density. See Roofing Application Standard RAS 117 for fastening details.

Membrane: UltraPly TPO XR 100 or UltraPly TPO XR 115 adhered with XR Stick Membrane Adhesive applied in continuous 1” wide ribbons spaced 4” o.c. and allowed to expand to full coverage prior to placement of the roof membrane. The 2” wide roof cover side laps are sealed with a minimum 1.5 in. heat weld placed on the outside edge of the lap.

Maximum Design Pressure: -172.5 psf. (See General Limitation #9)



Membrane Type: Single Ply, TPO, Reinforced
Deck Type 3I: Concrete, Insulated
Deck Description: 2500 psi or greater structural concrete or concrete plank
System Type A(10): One or more layers of insulation adhered with approved asphalt; membrane fully adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL Minimum 1.5" thick	N/A	N/A
Tapered ISO 95+ GL Minimum ½" thick start with a ¼" per ft. taper	N/A	N/A
Top Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft²
DensDeck Minimum ¼" thick	N/A	N/A

Note: Base insulation shall be adhered to the deck in full mopping of approved asphalt within the EVT range and at a rate of 20-40 lbs/100 ft². All subsequent layers of insulation shall be adhered to the previous layer of insulation in full mopping of approved asphalt within the EVT range and at a rate of 20-40 lbs/100 ft². Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulation listed as base layer only shall be used only as base layers with a second layer of approved top layer insulation installed as the final membrane substrate. Composite insulation panels used as a top layer shall be placed with the polyisocyanurate side facing down.

Membrane: UltraPly TPO membrane fully adhered to the top insulation layer with UltraPly Bonding Adhesive applied to both the substrate and the underside of the roof cover for a combined rate of 120 ft² /gal. The roof cover side and end laps are sealed with a minimum 1.5 in. heat weld.

Maximum Design Pressure: -195 psf. with DensDeck cover board (See General Limitation #9)
-180 psf. without cover board (See General Limitation #9)



Membrane Type: Single Ply, TPO, Reinforced
Deck Type 3I: Concrete, Insulated
Deck Description: 2500 psi or greater structural concrete or concrete plank
System Type A(11): One or more layers of insulation adhered with approved adhesive; membrane fully adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

Use Two base insulation layers

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL Minimum 1.5" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
DensDeck Prime Minimum ¼" thick	N/A	N/A

Note: Base insulation shall be adhered to the deck with I.S.O. Twin Pack Insulation Adhesive applied in ½ to ¾ in. wide ribbons spaced 8" o.c. All subsequent layers of insulation shall be adhered to the previous layer of insulation using I.S.O. Twin Pack Insulation Adhesive applied in ½ to ¾ in. wide ribbons spaced 8" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulations listed as the base layer shall only be used as the base layer with a second layer of approved top layer insulation installed as the final membrane substrate. Composite insulation boards used as a top layer shall be installed with the polyisocyanurate face down.

Membrane: UltraPly TPO membrane fully adhered to the top insulation layer with UltraPly Bonding Adhesive applied to both the substrate and the underside of the roof cover for a combined rate of 120 ft² /gal. The roof cover side and end laps are sealed with a minimum 1.5 in. heat weld.

Maximum Design Pressure: -195 psf. (See General Limitation #9)



Membrane Type: Single Ply, TPO, Reinforced
Deck Type 3I: Concrete, Insulated
Deck Description: Min. 2500 psi structural concrete or concrete plank.
System Type A(12): Vapor Barrier and insulation adhered with approved adhesive; membrane fully adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

Vapor Barrier MB Base Sheet M adhered with I.S.O. Twin Pack Insulation Adhesive applied in 1/2 - 3/4 in. wide ribbons spaced 12” o.c.

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of Vapor Barrier. Base insulation shall be adhered to the Vapor Barrier using ISO Twin Pack Insulation Adhesive, applied in 1/2” to 3/4” wide ribbons spaced 12” on center. All subsequent layers of insulation shall be adhered to the previous layer of insulation using ISO Twin Pack Insulation Adhesive, applied in 1/2” to 3/4” wide ribbons spaced 12” on center. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL Minimum: 1.5” thick	N/A	N/A
Middle Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL Minimum: 1.5” thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
DensDeck, DensDeck Prime Minimum: 1/4” thick	N/A	N/A

Membrane: One ply of UltraPly TPO fully adhered to coverboard using UltraPly Bonding Adhesive applied to both the substrate and the underside of the roof cover for a combined rate of 120 ft² /gal. The roof cover side laps are sealed with a minimum 1.5” heat weld.

Maximum Design Pressure: -232.5 psf. (See General Limitation #9)



Membrane Type: Single Ply, TPO, Reinforced
Deck Type 3I: Concrete, Insulated
Deck Description: Min. 2500 psi structural concrete or concrete plank.
System Type A(13): Vapor Barrier and insulation adhered with approved adhesive; membrane fully adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

Vapor Barrier SBS Poly Torch or SBS Glass Torch Base membrane is torch adhered to the primed concrete deck.

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of Vapor Barrier. Base insulation shall be adhered to the Vapor Barrier using ISO Twin Pack Insulation Adhesive, applied in 1/2" to 3/4" wide ribbons spaced 12" on center. All subsequent layers of insulation shall be adhered to the previous layer of insulation using ISO Twin Pack Insulation Adhesive, applied in 1/2" to 3/4" wide ribbons spaced 12" on center. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL Minimum: 1.5" thick	N/A	N/A
Middle Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL Minimum: 1.5" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
DensDeck, DensDeck Prime Minimum: 1/4" thick	N/A	N/A

Membrane: UltraPly TPO fully adhered to coverboard using UltraPly Bonding Adhesive applied to both the substrate and the underside of the roof cover for a combined rate of 120 ft² /gal. The roof cover side and end laps are sealed with a minimum 1.5 in. heat weld.

Maximum Design Pressure: -232.5 psf. (See General Limitation #9)



Membrane Type: Single Ply, TPO, Reinforced
Deck Type 3I: Concrete, Insulated
Deck Description: 2500 psi or greater structural concrete or concrete plank
System Type A(14): One or more layers of insulation adhered with approved adhesive; membrane fully adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
DensDeck Prime Minimum ¼” thick	N/A	N/A

Note: Insulation shall be adhered to the deck in full mopping of approved asphalt within the EVT range and at a rate of 20-25 lbs/sq. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: UltraPly TPO XR 100 or UltraPly TPO XR 115 fully adhered with XR Bonding Adhesive applied at a rate of 70-90 ft²/gallon. The roof cover laps are sealed with a minimum 1.5 in. heat weld.

Maximum Design Pressure: -232.5 psf. (See General Limitation #9)



Membrane Type: Single Ply, TPO, Reinforced
Deck Type 3I: Concrete, Insulated
Deck Description: 2500 psi or greater structural concrete or concrete plank
System Type A(15): One or more layers of insulation adhered with approved adhesive; membrane fully adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL Minimum 1.5" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
DensDeck Prime Minimum 1/4" thick	N/A	N/A

Note: Base insulation shall be adhered to the deck with I.S.O. Twin Pack Insulation Adhesive applied in 1/2 to 3/4 in. wide ribbons or with I.S.O. Stick applied in 3/4 to 1 in. wide ribbons, spaced as listed below. All subsequent layers of insulation shall be adhered to the previous layer of insulation using the same method of adhesion as the base layer. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulations listed as the base layer shall only be used as the base layer with a second layer of approved top layer insulation installed as the final membrane substrate. Composite insulation boards used as a top layer shall be installed with the polyisocyanurate face down.

Membrane: UltraPly TPO membrane fully adhered to the top insulation layer with UltraPly Bonding Adhesive applied to both the substrate and the underside of the roof cover for a combined rate of 120 ft² /gal. The roof cover side and end laps are sealed with a minimum 1.5 in. heat weld.

Maximum Design Pressure: -127.5 psf. using I.S.O Twin Pack Insulation Adhesive in ribbons spaced 12" o.c. (See General Limitation #9)
-150 psf. using I.S.O Stick in ribbons spaced 12" o.c. (See General Limitations #9)
-187.5 psf. using I.S.O Twin Pack Insulation Adhesive in ribbons spaced 8" o.c. (See General Limitation #9)
-247.5 psf. using I.S.O Twin Pack Insulation Adhesive in ribbons spaced 4" o.c. (See General Limitation #9)



Membrane Type: Single Ply, TPO, Reinforced
Deck Type 3I: Concrete, Insulated
Deck Description: Min. 2500 psi structural concrete or concrete plank.
System Type A(16): One or more layers of insulation adhered with approved adhesive; membrane fully adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL Minimum: 1.5" thick	N/A	N/A
Middle Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL Minimum: 1.5" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
Plywood Minimum: 19/32" thick	N/A	N/A

Note: Insulation shall be adhered to the deck with I.S.O. Stick applied in ¾ to 1 in. wide ribbons spaced 12" o.c. and walked in. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: UltraPly TPO membrane fully adhered with UltraPly Bonding Adhesive applied to both the substrate and the underside of the roof cover for a combined rate of 120 ft² /gal. The roof cover side and end laps are sealed with a minimum 1.5 in. heat weld.

Maximum Design Pressure: -247.5 psf. with Plywood (See General Limitation #9)



Membrane Type: Single Ply, TPO, Reinforced
Deck Type 3I: Concrete, Insulated
Deck Description: 2500 psi or greater structural concrete or concrete plank
System Type A(17): One or more layers of insulation adhered with approved adhesive; membrane fully adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISOGARD HD Minimum ½” thick	N/A	N/A

Note: Insulation shall be adhered to the deck with I.S.O. Fix II applied in ¾” – 1” wide ribbons spaced 4” o.c. or with I.S.O. Stick applied in continuous ¾” – 1” wide ribbons spaced 12” o.c. Adhesive. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: UltraPly TPO membrane fully adhered to the top insulation layer with UltraPly Bonding Adhesive applied to both the substrate and the underside of the roof cover for a combined rate of 120 ft² /gal. The roof cover side and end laps are sealed with a minimum 1.5 in. heat weld.

Maximum Design Pressure: -247.5 psf. (See General Limitation #9)



Membrane Type: Single Ply, TPO, Reinforced

Deck Type 3I: Concrete, Insulated

Deck Description: Min. 2500 psi structural concrete or concrete plank.

System Type A(18): One or more layers of insulation adhered with approved adhesive; membrane fully adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL Minimum 1.5" thick	N/A	N/A
Middle Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL Minimum 1.5" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISOGARD HD Minimum ½" thick	N/A	N/A

Note: All insulation layers shall be adhered with I.S.O. Twin Pack Insulation Adhesive applied in continuous 1/2 to 3/4 in. wide ribbons spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: UltraPly TPO membrane fully adhered to the top insulation layer with UltraPly Bonding Adhesive roller applied at a rate of 60 ft²/gallon (120 ft²/gallon to both the underside of membrane and substrate). The 3" wide roof cover side laps are sealed with a 1.5 in. wide heat weld.

Maximum Design Pressure: -247.5 psf. (See General Limitation #9)



Membrane Type: Single Ply, TPO, Reinforced
Deck Type 3I: Concrete, Insulated
Deck Description: 2500 psi or greater structural concrete or concrete plank
System Type A(19): One or more layers of insulation adhered with approved adhesive; membrane fully adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL Minimum 1.5” thick	N/A	N/A

Note: Base insulation shall be adhered to the deck with I.S.O. Twin Pack Insulation Adhesive applied in ½ to ¾ in. wide ribbons or with I.S.O. Stick applied in ¾ to 1 in. wide ribbons, spaced as listed below. All subsequent layers of insulation shall be adhered to the previous layer of insulation using the same method of adhesion as the base layer. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulations listed as the base layer shall only be used as the base layer with a second layer of approved top layer insulation installed as the final membrane substrate. Composite insulation boards used as a top layer shall be installed with the polyisocyanurate face down.

Membrane: UltraPly TPO membrane fully adhered to the top insulation layer with UltraPly Bonding Adhesive applied to both the substrate and the underside of the roof cover for a combined rate of 120 ft² /gal. The roof cover side and end laps are sealed with a minimum 1.5 in. heat weld.

Maximum Design Pressure: -150 psf. using I.S.O Stick Adhesive with ribbons spaced 12” o.c. (See General Limitations #9)
-165 psf. using I.S.O. Twin Pack Insulation Adhesive with ribbons spaced 12” o.c. (See General Limitation #9)
-240 psf. using I.S.O. Twin Pack Insulation Adhesive with ribbons spaced 8” o.c. (See General Limitation #9)
-285 psf. using I.S.O. Twin Pack Insulation Adhesive with ribbons spaced 4” o.c. (See General Limitation #9)



Membrane Type: Single Ply, TPO, Reinforced

Deck Type 3I: Concrete, Insulated

Deck Description: Min. 2500 psi structural concrete or concrete plank.

System Type A(20): One or more layers of insulation adhered with approved adhesive; membrane fully adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL Minimum 1.5” thick	N/A	N/A
Middle Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL Minimum 1.5” thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISOGARD HD Minimum ½” thick	N/A	N/A

Note: All insulation layers shall be adhered with I.S.O. Fix II applied in continuous 3/4 to 1 in. wide ribbons spaced 12” o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: UltraPly TPO membrane fully adhered to the top insulation layer with UltraPly Bonding Adhesive roller applied at a rate of 60 ft²/gallon (120 ft²/gallon to both the underside of membrane and substrate). The 3” wide roof cover side laps are sealed with a 1.5 in. wide heat weld.

Maximum Design Pressure: -300 psf. (See General Limitation #9)



Membrane Type: Single Ply, TPO, Reinforced

Deck Type 3I: Concrete, Insulated

Deck Description: Min. 2500 psi structural concrete or concrete plank.

System Type A(21): One or more layers of insulation adhered with approved adhesive; membrane fully adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL Minimum 1.5" thick	N/A	N/A
Middle Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL Minimum 1.5" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISOGARD HD Minimum ½" thick	N/A	N/A

Note: All insulation layers shall be adhered with I.S.O. Stick applied in continuous 3/4 to 1 in. wide ribbons spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: UltraPly TPO membrane fully adhered to the top insulation layer with UltraPly Bonding Adhesive roller applied at a rate of 60 ft²/gallon (120 ft²/gallon to both the underside of membrane and substrate) The 3" wide roof cover side laps are sealed with a 1.5 in. wide heat weld.

Maximum Design Pressure: -300 psf. (See General Limitation #9)



Membrane Type: Single Ply, TPO, Reinforced
Deck Type 3I: Concrete, Insulated
Deck Description: Min. 2500 psi structural concrete or concrete plank.
System Type A(22): One or more layers of insulation adhered with approved adhesive; membrane fully adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL Minimum: 1.5" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
DensDeck Prime Minimum: ¼" thick	N/A	N/A

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer at a rate of ¾ - 1 gal/sq. and allowed to dry prior to application of insulation. Insulation shall be adhered to the deck in full mopping of approved asphalt within the EVT range and at a rate of 20-25 lbs/sq. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: UltraPly TPO XR 100 or UltraPly TPO XR 115 fully adhered with hot asphalt applied at a rate of 20-25 lbs./sq. or with XR Bonding Adhesive applied at a rate of 70-90 ft²/gallon. The roof cover laps are sealed with a minimum 1.5 in. heat weld.

Maximum Design Pressure: -457.5 psf. with Hot Asphalt Applied (See General Limitation #9)
-300 psf. with XR Bonding Adhesive Applied (See General Limitation #9)



Membrane Type: Single Ply, TPO, Reinforced
Deck Type 3I: Concrete, Insulated
Deck Description: 2500 psi or greater structural concrete or concrete plank
System Type A(23): One or more layers of insulation adhered with approved adhesive; membrane fully adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL Minimum 1.5” thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
DensDeck Prime Minimum ¼” thick	N/A	N/A

Note: Insulation shall be adhered to the deck in full mopping of approved asphalt within the EVT range and at a rate of 20-25 lbs/sq. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: UltraPly TPO XR 100 or UltraPly TPO XR 115 fully adhered with hot asphalt applied at a rate of 20-25 lbs./sq. The roof cover laps are sealed with a minimum 1.5 in. heat weld.

Maximum Design Pressure: -457.5 psf. with coverboard (See General Limitation #9)



Membrane Type: Single Ply, TPO, Reinforced

Deck Type 3I: Concrete, Insulated

Deck Description: Min. 2500 psi structural concrete or concrete plank.

System Type A(24): One or more layers of insulation adhered with approved adhesive; membrane fully adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Insulation	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISOGARD HD Minimum ½” thick	N/A	N/A

Note: All insulation layers shall be adhered with I.S.O. Stick applied in continuous ¾” – 1” wide ribbons spaced 12” o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: UltraPly TPO membrane fully adhered to the top insulation layer with UltraPly Bonding Adhesive or roller applied at a rate of 60 ft²/gallon (120 ft²/gallon to both the underside of membrane and the substrate). The 3 in. wide roof cover side and end laps are sealed with a minimum 1.5 in. heat weld on the outside edge of the lap. Top surface of roof cover is then broomed to ensure contact.

Maximum Design Pressure: -247.5 psf. (See General Limitation #9)



Membrane Type: Single Ply, TPO, Reinforced

Deck Type 3I: Concrete, Insulated

Deck Description: Min. 2500 psi structural concrete or concrete plank.

System Type A(25): One or more layers of insulation adhered with approved adhesive; membrane fully adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Insulation	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISOGARD HD Minimum ½” thick	N/A	N/A

Note: All insulation layers shall be adhered with I.S.O. Stick applied in continuous ¾” – 1” wide ribbons spaced 12” o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: UltraPly TPO XR 100 or UltraPly TPO XR 115 membrane fully adhered to the top insulation layer with XR Bonding Adhesive textured or roller applied at a rate of 70 – 90 ft²/gallon. The 3 in. wide roof cover side and end laps are sealed with a minimum 1.5 in. heat weld on the outside edge of the lap. Top surface of roof cover is then broomed to ensure contact.

Maximum Design Pressure: -360 psf. (See General Limitation #9)



Membrane Type: Single Ply, TPO, Reinforced

Deck Type 3I: Concrete, Insulated

Deck Description: Min. 2500 psi structural concrete or concrete plank.

System Type A(26): One or more layers of insulation adhered with approved adhesive; membrane fully adhered.

Vapor Barrier Deck is primed with SA Primer applied at a rate of 200 ft²/gal. Firestone MB Base SA is self-adhered to the primed concrete deck.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL Minimum 1.5" thick	N/A	N/A
Middle Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL Minimum 1.5" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO GARD HD Minimum 1/2" thick	N/A	N/A

Note: All insulation layers shall be adhered with I.S.O. Twin Pack Adhesive applied in continuous 1/2 to 3/4 in. wide ribbons spaced 8" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: UltraPly TPO membrane fully adhered to the top insulation layer with UltraPly Bonding Adhesive or roller applied at a rate of 60 ft²/gallon (120 ft²/gallon to both the underside of membrane and the substrate). The 3 in. wide roof cover side and end laps are sealed with a minimum 1.5 in. heat weld on the outside edge of the lap. Top surface of roof cover is then broomed to ensure contact.

Maximum Design Pressure: -112.5 psf. (See General Limitation #9)



Membrane Type: Single Ply, TPO, Reinforced

Deck Type 3I: Concrete, Insulated

Deck Description: Min. 2500 psi structural concrete or concrete plank.

System Type A(27): One or more layers of insulation adhered with approved adhesive; membrane fully adhered.

Vapor Barrier Deck is primed with SA Primer applied at a rate of 200 ft²/gal. Firestone MB Base SA is self-adhered to the primed concrete deck.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL Minimum 1.5" thick	N/A	N/A
Middle Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL Minimum 1.5" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO GARD HD Minimum ½" thick	N/A	N/A

Note: All insulation layers shall be adhered with I.S.O. Twin Pack Adhesive applied in continuous 1/2 to 3/4 in. wide ribbons spaced 8" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: UltraPly TPO XR 100 or UltraPly TPO XR 115 membrane fully adhered to the top insulation layer with XR Bonding Adhesive textured roller applied at a rate of 70 – 90 ft²/gallon. The 3 in. wide roof cover side and end laps are sealed with a minimum 1.5 in. heat weld on the outside edge of the lap. Top surface of roof cover is then broomed to ensure contact.

Maximum Design Pressure: -112.5 psf. (See General Limitation #9)



Membrane Type: Single Ply, TPO, Reinforced

Deck Type 3I: Concrete, Insulated

Deck Description: Min. 2500 psi structural concrete or concrete plank.

System Type A(28): One or more layers of insulation adhered with approved adhesive; membrane fully adhered.

Vapor Barrier Deck is primed with SA Primer applied at a rate of 200 ft²/gal. Firestone MB Base SA is self-adhered to the primed concrete deck.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL Minimum 1.5" thick	N/A	N/A
Middle Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL Minimum 1.5" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
DensDeck, DensDeck Prime Minimum 1/4" thick	N/A	N/A

Note: All insulation layers shall be adhered with I.S.O. Twin Pack Adhesive applied in continuous 1/2 to 3/4 in. wide ribbons spaced 8" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: UltraPly TPO membrane fully adhered to the top insulation layer with UltraPly Bonding Adhesive roller applied at a rate of 60 ft²/gallon (120 ft²/gallon to both the underside of membrane and the substrate). The 3 in. wide roof cover side and end laps are sealed with a minimum 1.5 in. heat weld on the outside edge of the lap. Top surface of roof cover is then broomed to ensure contact.

Maximum Design Pressure: -112.5 psf. (See General Limitation #9)



Membrane Type: Single Ply, TPO, Reinforced

Deck Type 3I: Concrete, Insulated

Deck Description: Min. 2500 psi structural concrete or concrete plank.
Deck is primed with SA Primer applied at a rate of 200 ft²/gal. Firestone MB Base SA is self-adhered to the primed concrete deck.

System Type A(29): One or more layers of insulation adhered with approved adhesive; membrane fully adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL Minimum 1.5" thick	N/A	N/A
Middle Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL Minimum 1.5" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
DensDeck, DensDeck Prime Minimum 1/4" thick	N/A	N/A

Note: All insulation layers shall be adhered with I.S.O. Twin Pack Adhesive applied in continuous 1/2 to 3/4 in. wide ribbons spaced 8" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: UltraPly TPO XR 100 or UltraPly TPO XR 115 membrane fully adhered to the top insulation layer with XR Bonding Adhesive textured roller applied at a rate of 70 – 90 ft²/gallon. The 3 in. wide roof cover side and end laps are sealed with a minimum 1.5 in. heat weld on the outside edge of the lap. Top surface of roof cover is then broomed to ensure contact.

Maximum Design Pressure: -112.5 psf. (See General Limitation #9)



Membrane Type: Single Ply, TPO, Reinforced

Deck Type 3I: Concrete, Insulated

Deck Description: Min. 2500 psi structural concrete or concrete plank.

System Type A(30): One or more layers of insulation adhered with approved adhesive; membrane fully adhered.

Vapor Barrier Deck is primed with SA Primer applied at a rate of 200 ft²/gal. Firestone MB Base SA is self-adhered to the primed concrete deck.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL Minimum 1.5" thick	N/A	N/A
Middle Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL Minimum 1.5" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISOGARD HD Minimum ½" thick	N/A	N/A

Note: All insulation layers shall be adhered with I.S.O. Twin Pack Adhesive applied in continuous 1/2 to 3/4 in. wide ribbons spaced 12" o.c. or I.S.O. Stick applied in continuous 3/4 to 1 in. wide ribbons spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: UltraPly TPO membrane fully adhered to the top insulation layer with UltraPly Bonding Adhesive roller applied at a rate of 60 ft²/gallon (120 ft²/gallon to both the underside of membrane and the substrate). The 3 in. wide roof cover side and end laps are sealed with a minimum 1.5 in. heat weld on the outside edge of the lap. Top surface of roof cover is then broomed to ensure contact.

Maximum Design Pressure: -90 psf. (See General Limitation #9)



Membrane Type: Single Ply, TPO, Reinforced

Deck Type 3I: Concrete, Insulated

Deck Description: Min. 2500 psi structural concrete or concrete plank

System Type A(31): One or more layers of insulation adhered with approved adhesive; membrane fully adhered.

Vapor Barrier Deck is primed with SA Primer applied at a rate of 200 ft²/gal. Firestone MB Base SA is self-adhered to the primed concrete deck.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL Minimum 1.5" thick	N/A	N/A
Middle Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL Minimum 1.5" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO GARD HD Minimum ½" thick	N/A	N/A

Note: All insulation layers shall be adhered with I.S.O. Twin Pack Adhesive applied in continuous 1/2 to 3/4 in. wide ribbons spaced 12" o.c. or I.S.O. Stick applied in continuous 3/4 to 1 in. wide ribbons spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: UltraPly TPO XR 100 or UltraPly TPO XR 115 membrane fully adhered to the top insulation layer with XR Bonding Adhesive textured roller applied at a rate of 70 – 90 ft²/gallon. The 3 in. wide roof cover side and end laps are sealed with a minimum 1.5 in. heat weld on the outside edge of the lap. Top surface of roof cover is then broomed to ensure contact.

Maximum Design Pressure: -90 psf. (See General Limitation #9)



Membrane Type: Single Ply, TPO, Reinforced

Deck Type 3I: Concrete, Insulated

Deck Description: Min. 2500 psi structural concrete or concrete plank.

System Type A(32): One or more layers of insulation adhered with approved adhesive; membrane fully adhered.

Vapor Barrier Deck is primed with SA Primer applied at a rate of 200 ft²/gal. Firestone MB Base SA is self-adhered to the primed concrete deck.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL Minimum 1.5" thick	N/A	N/A
Middle Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL Minimum 1.5" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
DensDeck, DensDeck Prime Minimum 1/4" thick	N/A	N/A

Note: All insulation layers shall be adhered with I.S.O. Stick applied in continuous 3/4 to 1 in. wide ribbons spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: UltraPly TPO membrane fully adhered to the top insulation layer with UltraPly Bonding Adhesive roller applied at a rate of 60 ft²/gallon (120 ft²/gallon to both the underside of membrane and the substrate). The 3 in. wide roof cover side and end laps are sealed with a minimum 1.5 in. heat weld on the outside edge of the lap. Top surface of roof cover is then broomed to ensure contact.

Maximum Design Pressure: -90 psf. (See General Limitation #9)



Membrane Type: Single Ply, TPO, Reinforced

Deck Type 3I: Concrete, Insulated

Deck Description: Min. 2500 psi structural concrete or concrete plank.

System Type A(33): One or more layers of insulation adhered with approved adhesive; membrane fully adhered.

Vapor Barrier Deck is primed with SA Primer applied at a rate of 200 ft²/gal. Firestone MB Base SA is self-adhered to the primed concrete deck.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL Minimum 1.5" thick	N/A	N/A
Middle Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL Minimum 1.5" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
DensDeck, DensDeck Prime Minimum 1/4" thick	N/A	N/A

Note: All insulation layers shall be adhered with I.S.O. Stick applied in continuous 3/4 to 1 in. wide ribbons spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: UltraPly TPO XR 100 or UltraPly TPO XR 115 membrane fully adhered to the top insulation layer with XR Bonding Adhesive textured roller applied at a rate of 70 – 90 ft²/gallon. The 3 in. wide roof cover side and end laps are sealed with a minimum 1.5 in. heat weld on the outside edge of the lap. Top surface of roof cover is then broomed to ensure contact.

Maximum Design Pressure: -90 psf. (See General Limitation #9)



Membrane Type: Single Ply, TPO, Reinforced

Deck Type 3I: Concrete, Insulated

Deck Description: Min. 2500 psi structural concrete or concrete plank.

System Type A(34): One or more layers of insulation adhered with approved adhesive; membrane fully adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
RESISTA Minimum 1.5" thick	N/A	N/A
Middle Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft²
RESISTA Minimum 1.5" thick	N/A	N/A
Top Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISOGARD HD Minimum ½" thick	N/A	N/A

Note: Base insulation shall be adhered to the deck with I.S.O. Twin Pack Insulation Adhesive applied in ½ to ¾ in. wide ribbons spaced 6" o.c. or with I.S.O. Stick applied in ¾ to 1 in. wide ribbons, spaced 6" o.c. and walked in or in full mopping of approved asphalt within the EVT range and at a rate of 20-25 lbs/sq. Optional middle insulation layer shall be adhered to the previous layer of insulation using the same method of adhesion as the base layer. Optional top layer of insulation shall be adhered with I.S.O. Stick applied in continuous ¾ to 1 in. wide ribbons spaced 6" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: UltraPly TPO membrane fully adhered to the top insulation layer with UltraPly Bonding Adhesive roller applied at a rate of 60 ft²/gallon (120 ft²/gallon to both the underside of membrane and the substrate). The 3 in. wide roof cover side and end laps are sealed with a minimum 1.5 in. heat weld on the outside edge of the lap. Top surface of roof cover is then broomed to ensure contact.

Maximum Design Pressure: -360 psf. (See General Limitation #9)



Membrane Type: Single Ply, TPO, Reinforced

Deck Type 3I: Concrete, Insulated

Deck Description: Min. 2500 psi structural concrete or concrete plank.

System Type A(35): One or more layers of insulation adhered with approved adhesive; membrane adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Insulation	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL Minimum 1" thick	N/A	N/A

Note: Base insulation shall be adhered to the deck with I.S.O. FIX II applied in 3/4 to 1 in. wide ribbons, spaced 12" o.c. or I.S.O. Twin Pack Insulation Adhesive or I.S.O. Stick applied in continuous 1/2 – 3/4 in. wide ribbons spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: UltraPly TPO XR 100 membrane adhered to the top insulation layer with XR Stick Membrane Adhesive applied in continuous 3/4 - 1 in. wide ribbons spaced 12" o.c. The roof cover side laps are sealed with a minimum 1.5 in. heat weld.

Maximum Design Pressure: -145 psf. (See General Limitation #9)



Membrane Type: Single Ply, TPO, Reinforced

Deck Type 3I: Concrete, Insulated

Deck Description: Min. 2500 psi structural concrete or concrete plank.

System Type A(36): One or more layers of insulation adhered with approved adhesive; membrane adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Base Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL Minimum 1" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
DensDeck Prime Minimum 1/4" thick	N/A	N/A

Note: All layers of insulation shall be adhered to the deck with I.S.O. Fix II or I.S.O. Stick applied in 3/4 to 1 in. wide ribbons, spaced 12" o.c. or I.S.O. Twin Pack Insulation Adhesive applied in 1/2 - 3/4 in. wide ribbons, spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: UltraPly TPO XR 100 membrane adhered to the top insulation layer with XR Stick Membrane Adhesive applied in continuous 3/4 - 1 in. wide ribbons spaced 12" o.c. The roof cover side laps are sealed with a minimum 1.5 in. heat weld.

Maximum Design Pressure: -160 psf. (See General Limitation #9)



Membrane Type: Single Ply, TPO, Reinforced
Deck Type 3I: Concrete, Insulated
Deck Description: Min. 2500 psi structural concrete or concrete plank
System Type B(1): Base layer of insulation mechanically fastened, optional top layer fully adhered with approved adhesive.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL Minimum 1.5" thick	1 with 7	1:2 ft²
Top Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL Minimum 1.5" thick	N/A	N/A
Tapered ISO 95+ GL Minimum ½" thick with a ¼" per ft. taper	N/A	N/A

Note: Base layer shall be mechanically attached with fasteners and density described. All other layers of insulation shall be adhered to base insulations with I.S.O. Twin Pack Insulation Adhesive applied in ½ – ¾ in. wide ribbons spaced 12 in. o.c. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density. See Roofing Application Standard RAS 117 for fastening details.

Membrane: UltraPly TPO membrane fully adhered to the top insulation layer with UltraPly Bonding Adhesive roller applied at a rate of 60 ft²/gallon (120 ft²/gallon to both the underside of the roof cover and the substrate). The roof cover side laps are sealed with a minimum 1.5 in. heat weld.

Maximum Design Pressure: -45 psf. (See General Limitation #7)



Membrane Type: Single Ply, TPO, Reinforced
Deck Type 3I: Concrete, Insulated
Deck Description: Min. 2500 psi structural concrete or concrete plank
System Type B(2): Base layer of insulation mechanically fastened, optional top layer adhered with approved adhesive.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL Minimum 1.5" thick	1 or 8 with 7	1:2 ft²
Middle Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL Minimum 1" thick	N/A	N/A
Additional Middle Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft²
Tapered ISO 95+ GL Minimum ½" thick with a ¼" per ft. taper	N/A	N/A
Top Insulation Layer (cover board)	Insulation Fasteners (Table 3)	Fastener Density/ft²
DensDeck Prime Minimum ¼" thick	N/A	N/A

Note: Base layer shall be mechanically attached with fasteners and density described. All other layers of insulation shall be adhered to base insulations with I.S.O. Twin Pack Insulation Adhesive in continuous ½" – ¾" wide beads spaced 12" o.c. or I.S.O. Fix II or I.S.O. Stick applied in continuous ¾" – 1" wide ribbons spaced 12" o.c. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density. See Roofing Application Standard RAS 117 for fastening details.

Membrane: UltraPly TPO XR 100 or UltraPly TPO XR 115 membrane adhered to the top insulation layer with XR Stick Membrane Adhesive applied in continuous ¾" – 1" wide ribbons spaced 12" o.c. The 2 in. wide roof cover side and end laps are sealed with a minimum 1.5 in. heat weld.

Maximum Design Pressure: -45 psf. (See General Limitation #7)



Membrane Type: Single Ply, TPO, Reinforced
Deck Type 3I: Concrete, Insulated
Deck Description: Min. 2500 psi structural concrete or concrete plank
System Type B(3): Base layer of insulation mechanically fastened, optional top layer adhered with approved adhesive.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL Minimum 1.5" thick	1 or 8 with 7	1:2 ft²
Middle Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL Minimum 1" thick	N/A	N/A
Additional Middle Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft²
Tapered ISO 95+ GL Minimum ½" thick with a ¼" per ft. taper	N/A	N/A
Top Insulation Layer (cover board)	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISOGARD HD Minimum ½" thick	N/A	N/A

Note: Base layer shall be mechanically attached with fasteners and density described. All other layers of insulation shall be adhered to base insulations with I.S.O. Twin Pack Insulation Adhesive in continuous ½" – ¾" wide beads spaced 12" o.c. or I.S.O. Fix II or I.S.O. Stick applied in continuous ¾" – 1" wide ribbons spaced 12" o.c. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density. See Roofing Application Standard RAS 117 for fastening details.

Membrane: UltraPly TPO XR 100 or UltraPly TPO XR 115 membrane adhered to the top insulation layer with XR Stick Membrane Adhesive applied in continuous ¾" – 1" wide ribbons spaced 4" o.c. and allowed to expand to full coverage prior to placement of the roof membrane. The 2 in. wide roof cover side and end laps are sealed with a minimum 1.5 in. heat weld.

Maximum Design Pressure: -45 psf. (See General Limitation #7)



Membrane Type: Single Ply, TPO, Reinforced

Deck Type 3I: Concrete, Insulated

Deck Description: Min. 2500 psi structural concrete or concrete plank

System Type B(4): Base layer of insulation mechanically fastened, membrane fully adhered with approved adhesive.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISOGARD HD Composite Minimum 1" thick	1 or 8 with 7	1: 1.33 ft ²

Note: Base layer shall be mechanically attached with fasteners and density described above. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density. See Roofing Application Standard RAS 117 for fastening details.

Membrane: UltraPly TPO membrane fully adhered to the top insulation layer with UltraPly Bonding Adhesive applied to both the substrate and the underside of the roof cover for a combined rate of 120 ft² /gal. The roof cover side and end laps are sealed with a minimum 1.5 in. heat weld.

Maximum Design Pressure: -60 psf. (See General Limitation #7)



Membrane Type: Single Ply, TPO, Reinforced

Deck Type 2I: Concrete, Insulated

Deck Description: Min. 2500 psi structural concrete or concrete plank

System Type B(5): Base layer of insulation mechanically fastened, top layer adhered with approved adhesive.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL Minimum 1.5" thick	1 or 8 with 7	1:1.6 ft ²
Top Insulation Layer (cover board)	Insulation Fasteners (Table 3)	Fastener Density/ft ²
DensDeck Prime Minimum ½" thick	N/A	N/A

Note: Base layer shall be mechanically attached with fasteners and density described. Top layer of insulation shall be adhered to base insulations with I.S.O. Twin Pack Insulation Adhesive in continuous ½" – ¾" wide beads spaced 6" o.c. or I.S.O. Fix II or I.S.O. Stick applied in continuous ¾" – 1" wide ribbons spaced 6" o.c. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density. See Roofing Application Standard RAS 117 for fastening details.

Membrane: UltraPly TPO XR 100 or UltraPly TPO XR 115 membrane adhered to the top insulation layer with XR Stick Membrane Adhesive applied in continuous ¾" – 1" wide ribbons spaced 6" o.c. The 2 in. wide roof cover side and end laps are sealed with a minimum 1.5 in. heat weld placed on the outside edge of lap.

Maximum Design Pressure: -60 psf. (See General Limitation #7)



Membrane Type: Single Ply, TPO, Reinforced

Deck Type 2I: Concrete, Insulated

Deck Description: Min. 2500 psi structural concrete or concrete plank

System Type B(6): Base layer of insulation mechanically fastened, optional top layer adhered with approved adhesive.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL Minimum 2" thick	1 or 8 with 7	1:1.6 ft²
Top Insulation Layer (cover board)	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL Minimum 1" thick	N/A	N/A

Note: Base layer shall be mechanically attached with fasteners and density described. Top layer of insulation shall be adhered to base insulations with I.S.O. Twin Pack Insulation Adhesive in continuous 1/2" – 3/4" wide beads spaced 6" o.c. or I.S.O. Fix II or I.S.O. Stick applied in continuous 3/4" – 1" wide ribbons spaced 6" o.c. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density. See Roofing Application Standard RAS 117 for fastening details.

Membrane: UltraPly TPO XR 100 or UltraPly TPO XR 115 membrane adhered to the top insulation layer with XR Stick Membrane Adhesive applied in continuous 3/4" – 1" wide ribbons spaced 6" o.c. The 2 in. wide roof cover side and end laps are sealed with a minimum 1.5 in. heat weld.

Maximum Design Pressure: -75 psf. (See General Limitation #7)



Membrane Type: Single Ply, TPO, Reinforced
Deck Type 3I: Concrete, Insulated
Deck Description: Min. 2500 psi structural concrete or concrete plank
System Type B(7): Base layer of insulation mechanically fastened, top layer adhered with approved adhesive.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL Minimum 2" thick	1 or 8 with 7	1:1 ft ²
Top Insulation Layer (cover board)	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISOGARD HD Minimum 1/2" thick	N/A	N/A

Note: Base layer shall be mechanically attached with fasteners and density described. Top layer of insulation shall be adhered to base insulations with I.S.O. Twin Pack Insulation Adhesive in continuous 1/2" – 3/4" wide beads spaced 12" o.c. or I.S.O. Fix II or I.S.O. Stick applied in continuous 3/4" – 1" wide ribbons spaced 12" o.c. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density. See Roofing Application Standard RAS 117 for fastening details.

Membrane: UltraPly TPO membrane fully adhered to the top insulation layer with UltraPly Bonding Adhesive applied to both the substrate and the underside of the roof cover for a combined rate of 120 ft² /gal. The roof cover side and end laps are sealed with a minimum 1.5 in. heat weld.

Maximum Design Pressure: -90 psf. (See General Limitation #7)



Membrane Type: Single Ply, TPO, Reinforced

Deck Type 3I: Concrete, Insulated

Deck Description: Min. 2500 psi structural concrete or concrete plank

System Type B(8): Base layer of insulation mechanically fastened, membrane fully adhered with approved adhesive.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISOGARD HD Composite Minimum 1.5" thick	1 or 8 with 7	1: 1.33 ft²

Note: Base layer shall be mechanically attached with fasteners and density described above. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density. See Roofing Application Standard RAS 117 for fastening details.

Membrane: UltraPly TPO membrane fully adhered to the top insulation layer with UltraPly Bonding Adhesive applied to both the substrate and the underside of the roof cover for a combined rate of 120 ft² /gal. The roof cover side and end laps are sealed with a minimum 1.5 in. heat weld.

Maximum Design Pressure: -112.5 psf. (See General Limitation #7)



Membrane Type: Single Ply, TPO, Reinforced

Deck Type 3I: Concrete, Insulated

Deck Description: Min. 2500 psi structural concrete or concrete plank

System Type B(9): Base layer of insulation mechanically fastened, membrane fully adhered with approved adhesive.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISOGARD HD Composite Minimum 2" thick	1 or 8 with 7	1: 1.33 ft²

Note: Base layer shall be mechanically attached with fasteners and density described above. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density. See Roofing Application Standard RAS 117 for fastening details.

Membrane: UltraPly TPO membrane fully adhered to the top insulation layer with UltraPly Bonding Adhesive applied to both the substrate and the underside of the roof cover for a combined rate of 120 ft² /gal. The roof cover side and end laps are sealed with a minimum 1.5 in. heat weld.

Maximum Design Pressure: -120 psf. (See General Limitation #7)



Membrane Type: Single Ply, TPO, Reinforced

Deck Type 2I: Concrete, Insulated

Deck Description: Min. 2500 psi structural concrete or concrete plank

System Type B(10): Base layer of insulation mechanically fastened, top layer adhered with approved adhesive.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL Minimum 2" thick	1 or 8 with 7	1:1 ft²
Top Insulation Layer (cover board)	Insulation Fasteners (Table 3)	Fastener Density/ft²
DensDeck Prime Minimum 1/2" thick	N/A	N/A

Note: Base layer shall be mechanically attached with fasteners and density described. Top layer of insulation shall be adhered to base insulations with I.S.O. Twin Pack Insulation Adhesive in continuous 1/2" – 3/4" wide beads spaced 4" o.c. or I.S.O. Fix II or I.S.O. Stick applied in continuous 3/4" – 1" wide ribbons spaced 4" o.c. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density. See Roofing Application Standard RAS 117 for fastening details.

Membrane: UltraPly TPO XR 100 or UltraPly TPO XR 115 membrane adhered to the top insulation layer with XR Stick Membrane Adhesive applied in continuous 3/4" – 1" wide ribbons spaced 4" o.c. and allowed to expand to full coverage prior to placement of the roof membrane. The 2 in. wide roof cover side and end laps are sealed with a minimum 1.5 in. heat weld placed on the outside edge of lap.

Maximum Design Pressure: -127.5 psf. (See General Limitation #7)



Membrane Type: Single Ply, TPO, Reinforced

Deck Type 3I: Concrete, Insulated

Deck Description: Min. 2500 psi structural concrete or concrete plank

System Type B(11): Base layer of insulation mechanically fastened, top layer adhered with approved adhesive.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations:

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL Minimum 2” thick	1 & 7 or 8 & 7	1:1 ft ²
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISOGARD HD Minimum 1/2” thick	N/A	N/A

Note: Base layer shall be mechanically attached with fasteners and density described. Top layer of insulation shall be adhered to base insulations with I.S.O. Twin Pack Insulation Adhesive in continuous 1/2” – 3/4” wide beads spaced 12” o.c. or I.S.O. Stick applied in continuous 3/4” – 1” wide ribbons spaced 12” o.c. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density. See Roofing Application Standard RAS 117 for fastening details.

Membrane: UltraPly TPO membrane fully adhered to the top insulation layer with UltraPly Bonding Adhesive roller applied at a rate of 60 ft²/gallon (120 ft²/gallon to both the underside of membrane and the substrate). The 3 in. wide roof cover side and end laps are sealed with a minimum 1.5 in. heat weld on the outside edge of the lap. Top surface of roof cover is then broomed to ensure contact.

Maximum Design Pressure: -90 psf. (See General Limitation #7)



Membrane Type: Single Ply, TPO, Reinforced

Deck Type 3I: Concrete, Insulated

Deck Description: Min. 2500 psi structural concrete or concrete plank

System Type B(12): Base layer of insulation mechanically fastened, top layer adhered with approved adhesive.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations:

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
RESISTA Minimum 1.5" thick	1 & 7 or 8 & 7	1:1 ft ²
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
RESISTA Minimum 1.5" thick	N/A	N/A

Note: Base layer shall be mechanically attached with fasteners and density described. Top layer of insulation shall be adhered to base insulations with I.S.O. Twin Pack Insulation Adhesive in continuous 1/2" – 3/4" wide beads spaced 12" o.c. or I.S.O. Stick applied in continuous 3/4" – 1" wide ribbons spaced 12" o.c. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density. See Roofing Application Standard RAS 117 for fastening details.

Membrane: UltraPly TPO membrane fully adhered to the top insulation layer with UltraPly Bonding Adhesive roller applied at a rate of 60 ft²/gallon (120 ft²/gallon to both the underside of membrane and the substrate). The 3 in. wide roof cover side and end laps are sealed with a minimum 1.5 in. heat weld on the outside edge of the lap. Top surface of roof cover is then broomed to ensure contact.

Maximum Design Pressure: -120 psf. (See General Limitation #7)



Membrane Type: Single Ply, TPO, Reinforced
Deck Type 3I: Concrete, Insulated
Deck Description: Min. 2500 psi structural concrete or concrete plank.
System Type C(1): Membrane bonded over mechanically fastened insulation.

Thermal Barrier: (Optional) Minimum ¼” thick DensDeck, DensDeck Prime loose laid

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL Minimum 1.5” thick	N/A	N/A

Note: All layers shall be simultaneously fastened; see top layer below for fasteners and density. Insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISOGARD HD Minimum ½” thick	1 or 8 with 15	1:5.3 ft²
DensDeck, DensDeck Prime Minimum ¼” thick	1 or 8 with 15	1:5.3 ft²
Plywood Minimum 19/32” thick	1 or 8 with 15	1:5.3 ft²

Membrane: UltraPly TPO is bonded to the UltraPly TPO InvisiWeld Plates using a RhinoBond Portable Bonding Tool and weighted RhinoBond Cooling Clamps. The minimum 6 in. wide roof cover side laps are sealed with a minimum 1.5 in. wide heat weld on the outside edge of the lap.

Maximum Design Pressure: -45 psf. (See General Limitation #9)



Membrane Type: Single Ply, TPO, Reinforced
Deck Type 3I: Concrete, Insulated
Deck Description: Min. 2500 psi structural concrete or concrete plank.
System Type C(2): Membrane bonded over mechanically fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL Minimum 1.5" thick	N/A	N/A

Note: All layers shall be simultaneously fastened; see top layer below for fasteners and density. Insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISOGARD HD Minimum ½" thick	1 or 8 and 15	See Design Pressure
DensDeck, DensDeck Prime Minimum ¼" thick	1 or 8 and 15	See Design Pressure
Plywood Minimum 19/32" thick	1 or 8 and 15	See Design Pressure

Membrane: UltraPly TPO is bonded to the UltraPly TPO InvisiWeld Plates using a RhinoBond Portable Bonding Tool and weighted RhinoBond Cooling Clamps. The minimum 3 in. wide roof cover side laps are sealed with a minimum 1.5 in. wide heat weld on the outside edge of the lap.

Maximum Design Pressure:	Maximum Pressure	Fastener Spacing	Fastener Row Spacing
	-45 psf. (See General Limitation #7)	12 in.	5 ft.



Membrane Type: Single Ply, TPO, Reinforced
Deck Type 3I: Concrete, Insulated
Deck Description: Min. 2500 psi structural concrete or concrete plank
System Type C(3): Membrane fully adhered over mechanically fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL Minimum 1.5" thick	N/A	N/A

Note: All layers shall be simultaneously fastened; see top layer below for fasteners and density. Insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer (cover board)	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISOGARD HD Minimum 1" thick	1 or 8 with 7	1: 1.8 ft²

Membrane: UltraPly TPO membrane fully adhered to the top insulation layer with UltraPly Bonding Adhesive applied to both the substrate and the underside of the roof cover for a combined rate of 120 ft²/gal. The roof cover side and end laps are sealed with a minimum 1.5 in. heat weld.

Maximum Design Pressure: -45 psf. (See General Limitation #7)



Membrane Type: Single Ply, TPO, Reinforced
Deck Type 2I: Concrete, Insulated
Deck Description: Min. 2500 psi structural concrete or concrete plank
System Type C(4): Membrane adhered over mechanically fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL Minimum 1.5" thick	1 or 8 with 7	1:2 ft²

Note: All insulation layers shall be mechanically attached with fasteners and density described. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density. See Roofing Application Standard RAS 117 for fastening details.

Membrane: UltraPly TPO XR 100 or UltraPly TPO XR 115 membrane adhered to the top insulation layer with XR Stick Membrane Adhesive applied in continuous 3/4" – 1" wide ribbons spaced 12" o.c. The 2 in. wide roof cover side and end laps are sealed with a minimum 1.5 in. heat weld on the outside edge of the lap.

Maximum Design Pressure: -45 psf. (See General Limitation #9)



Membrane Type: Single Ply, TPO, Reinforced
Deck Type 3I: Concrete, Insulated
Deck Description: Min. 2500 psi structural concrete or concrete plank
System Type C(5): Membrane adhered over mechanically fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Base Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL Minimum 1.0" thick	N/A	N/A
Tapered ISO 95+ GL Minimum ½" thick with a ¼" per ft. taper	N/A	N/A

Note: Base layers shall be simultaneously fastened; see top layer below for fasteners and density. Insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL Minimum 2 ¼" thick	1 or 8 with 7	1:4 ft ²

Additional Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL Minimum 1.5" thick	N/A	N/A

Note: Top layer shall be mechanically attached with fasteners and density described. Additional layers of insulation shall be adhered to top insulation with I.S.O. Twin Pack Insulation Adhesive in continuous ½" – ¾" wide beads spaced 12" o.c. or I.S.O. Fix II or I.S.O. Stick applied in continuous ¾" – 1" wide ribbons spaced 12" o.c. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density. See Roofing Application Standard RAS 117 for fastening details.

Membrane: UltraPly TPO XR 100 or UltraPly TPO XR 115 membrane adhered to the top insulation layer with XR Stick Membrane Adhesive applied in continuous ¾" – 1" wide ribbons spaced 12" o.c. The 2 in. wide roof cover side and end laps are sealed with a minimum 1.5 in. heat weld placed on the outside edge of the lap.

Maximum Design Pressure: -45 psf. (See General Limitation #9)



Membrane Type: Single Ply, TPO, Reinforced
Deck Type 2I: Concrete, Insulated
Deck Description: Min. 2500 psi structural concrete or concrete plank
System Type C(6): Membrane adhered over mechanically fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL Minimum 1.5" thick	N/A	N/A
Middle Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft²
Tapered ISO 95+ GL Minimum ½" thick with a ¼" per ft. taper	N/A	N/A

Note: All layers shall be simultaneously fastened; see top layer below for fasteners and density. Insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer (cover board)	Insulation Fasteners (Table 3)	Fastener Density/ft²
DensDeck Prime Minimum ¼" thick	1 or 8 with 7	1:2 ft²
Plywood Minimum 19/32" thick	1 or 8 with 7	1:2 ft²

Membrane: UltraPly TPO XR 100 or UltraPly TPO XR 115 membrane adhered to the top insulation layer with XR Stick Membrane Adhesive applied in continuous ¾" – 1" wide ribbons spaced 12" o.c. The 2 in. wide roof cover side and end laps are sealed with a minimum 1.5 in. heat weld placed on the outside edge of the lap.

Maximum Design Pressure: -45 psf. (See General Limitation #9)



Membrane Type: Single Ply, TPO, Reinforced
Deck Type 2I: Concrete, Insulated
Deck Description: Min. 2500 psi structural concrete or concrete plank
System Type C(7): Membrane adhered over mechanically fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL Minimum 1.5" thick	N/A	N/A
Middle Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft²
Tapered ISO 95+ GL Minimum ½" thick with a ¼" per ft. taper	N/A	N/A

Note: All layers shall be simultaneously fastened; see top layer below for fasteners and density. Insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer (cover board)	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISOGARD HD Minimum ½" thick	1 or 8 with 7	1:2 ft²

Membrane: UltraPly TPO XR 100 or UltraPly TPO XR 115 membrane adhered to the top insulation layer with XR Stick Membrane Adhesive applied in continuous 1" wide ribbons spaced 4" o.c. and allowed to expand to full coverage prior to the placement of the roof membrane. The 2 in. wide roof cover side and end laps are sealed with a minimum 1.5 in. heat weld placed on the outside edge of the lap.

Maximum Design Pressure: -45 psf. (See General Limitation #9)



Membrane Type: Single Ply, TPO, Reinforced
Deck Type 3I: Concrete, Insulated
Deck Description: Min. 2500 psi structural concrete or concrete plank
System Type C(8): All layers of insulation simultaneously attached; membrane fully adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL Minimum 1.5" thick	N/A	N/A

Note: All layers shall be simultaneously fastened; see top layer below for fasteners and density. Insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
Plywood Minimum 19/32" thick	6	1:1.6 ft ²

Membrane: UltraPly TPO membrane fully adhered to the top insulation layer with UltraPly Bonding Adhesive applied to both the substrate and the underside of the roof cover for a combined rate of 120 ft² /gal. The roof cover side and end laps are sealed with a minimum 1.5 in. heat weld.

Maximum Design Pressure: -52.5 psf. (See General Limitation #7)



Membrane Type: Single Ply, TPO, Reinforced
Deck Type 3I: Concrete, Insulated
Deck Description: Min. 2500 psi structural concrete or concrete plank.
System Type C(9): Membrane bonded over mechanically fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL Minimum 1.5" thick	N/A	N/A

Note: All layers shall be simultaneously fastened; see top layer below for fasteners and density. Insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISOGARD HD Minimum ½" thick	1 or 8 with 15	1:4 ft ²
DensDeck, DensDeck Prime Minimum ¼" thick	1 or 8 with 15	1:4 ft ²
Plywood Minimum 19/32" thick	1 or 8 with 15	1:4 ft ²

Membrane: UltraPly TPO is bonded to the UltraPly TPO InvisiWeld Plates using a RhinoBond Portable Bonding Tool and weighted RhinoBond Cooling Clamps. The minimum 6 in. wide roof cover side laps are sealed with a minimum 1.5 in. wide heat weld on the outside edge of the lap.

Maximum Design Pressure: -60 psf. (See General Limitation #7)



Membrane Type: Single Ply, TPO, Reinforced
Deck Type 3I: Concrete, Insulated
Deck Description: Min. 2500 psi structural concrete or concrete plank
System Type C(10): Membrane fully adhered over mechanically fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL Minimum 1.5” thick	N/A	N/A

Note: All layers shall be simultaneously fastened; see top layer below for fasteners and density. Insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer (cover board)	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISOGARD HD Minimum ½” thick	1 or 8 with 7	1: 1.33 ft²

Membrane: UltraPly TPO membrane fully adhered to the top insulation layer with UltraPly Bonding Adhesive applied to both the substrate and the underside of the roof cover for a combined rate of 120 ft² /gal. The roof cover side and end laps are sealed with a minimum 1.5 in. heat weld.

Maximum Design Pressure: -60 psf. (See General Limitation #7)



Membrane Type: Single Ply, TPO, Reinforced
Deck Type 3I: Concrete, Insulated
Deck Description: Min. 2500 psi structural concrete or concrete plank.
System Type C(11): Membrane bonded over mechanically fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL Minimum 1.5" thick	N/A	N/A

Note: All layers shall be simultaneously fastened; see top layer below for fasteners and density. Insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISOGARD HD Minimum ½" thick	1 or 8 with 15	1:2.7 ft ²
DensDeck, DensDeck Prime Minimum ¼" thick	1 or 8 with 15	1:2.7 ft ²
Plywood Minimum 19/32" thick	1 or 8 with 15	1:2.7 ft ²

Membrane: UltraPly TPO is bonded to the UltraPly TPO InvisiWeld Plates using a RhinoBond Portable Bonding Tool and weighted RhinoBond Cooling Clamps. The minimum 6 in. wide roof cover side laps are sealed with a minimum 1.5 in. wide heat weld on the outside edge of the lap.

Maximum Design Pressure: -75 psf. (See General Limitation #7)



Membrane Type: Single Ply, TPO, Reinforced
Deck Type 3I: Concrete, Insulated
Deck Description: Min. 2500 psi structural concrete or concrete plank
System Type C(12): Membrane fully adhered over mechanically fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

Base Insulation Layer	Fastener Type (Table 3)	Fastener Density/ft ²
ISO 95+ GL Minimum 2" thick	4	1:1.6

Note: Base layer shall be mechanically attached with fasteners and density described above. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density. See Roofing Application Standard RAS 117 for fastening details.

Membrane: UltraPly TPO membrane fully adhered to the top insulation layer with UltraPly Bonding Adhesive applied to both the substrate and the underside of the roof cover for a combined rate of 120 ft² /gal. The roof cover side and end laps are sealed with a minimum 1.5 in. heat weld.

Maximum Design Pressure: -75 psf. (See General Limitation #7)



Membrane Type: Single Ply, TPO, Reinforced
Deck Type 3I: Concrete, Insulated
Deck Description: Min. 2500 psi structural concrete or concrete plank.
System Type C(13): Membrane bonded over mechanically fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL Minimum 1.5" thick	N/A	N/A

Note: All layers shall be simultaneously fastened; see top layer below for fasteners and density. Insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISOGARD HD Minimum ½" thick	1 or 8 with 15	See Design Pressure
DensDeck, DensDeck Prime Minimum ¼" thick	1 or 8 with 15	See Design Pressure
Plywood Minimum 19/32" thick	1 or 8 with 15	See Design Pressure

Membrane: UltraPly TPO is bonded to the UltraPly TPO InvisiWeld Plates using a RhinoBond Portable Bonding Tool and weighted RhinoBond Cooling Clamps. The minimum 3 in. wide roof cover side laps are sealed with a minimum 1.5 in. wide heat weld on the outside edge of the lap.

Maximum Design Pressure:	Maximum Pressure	Fastener Spacing	Fastener Row Spacing
	-82.5 psf. (See General Limitation #7)	6 in.	5 ft.



Membrane Type: Single Ply, TPO, Reinforced
Deck Type 2I: Concrete, Insulated
Deck Description: Min. 2500 psi structural concrete or concrete plank
System Type C(14): Membrane adhered over mechanically fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL Minimum 2" thick	1 or 8 with 7	1:1.6 ft²

Note: Insulation layer shall be mechanically attached with fasteners and density described. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density. See Roofing Application Standard RAS 117 for fastening details.

Membrane: UltraPly TPO XR 100 or UltraPly TPO XR 115 membrane adhered to the top insulation layer with XR Stick Membrane Adhesive applied in continuous 3/4" – 1" wide ribbons spaced 6" o.c. The 2 in. wide roof cover side and end laps are sealed with a minimum 1.5 in. heat weld placed on the outside edge of the lap.

Maximum Design Pressure: -82.5 psf. (See General Limitation #7)



Membrane Type: Single Ply, TPO, Reinforced
Deck Type 3I: Concrete, Insulated
Deck Description: Min. 2500 psi structural concrete or concrete plank
System Type C(15): Membrane fully adhered over mechanically fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

Base Insulation Layer	Fastener Type (Table 3)	Fastener Density/ft ²
ISO 95+ GL Minimum 1.5" thick	4	1:1.33

Note: Base layer shall be mechanically attached with fasteners and density described above. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density. See Roofing Application Standard RAS 117 for fastening details.

Membrane: UltraPly TPO membrane fully adhered to the top insulation layer with UltraPly Bonding Adhesive applied to both the substrate and the underside of the roof cover for a combined rate of 120 ft² /gal. The roof cover side and end laps are sealed with a minimum 1.5 in. heat weld.

Maximum Design Pressure: -90 psf. (See General Limitation #7)



Membrane Type: Single Ply, TPO, Reinforced
Deck Type 3I: Concrete, Insulated
Deck Description: Min. 2500 psi structural concrete or concrete plank.
System Type C(16): Membrane bonded over mechanically fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL Minimum 1.5" thick	N/A	N/A

Note: All layers shall be simultaneously fastened; see top layer below for fasteners and density. Insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISOGARD HD Minimum ½" thick	1 or 8 with 15	1:2 ft ²
DensDeck, DensDeck Prime Minimum ¼" thick	1 or 8 with 15	1:2 ft ²
Plywood Minimum 19/32" thick	1 or 8 with 15	1:2 ft ²

Membrane: UltraPly TPO is bonded to the UltraPly TPO InvisiWeld Plates using a RhinoBond Portable Bonding Tool and weighted RhinoBond Cooling Clamps. The minimum 6 in. wide roof cover side laps are sealed with a minimum 1.5 in. wide heat weld on the outside edge of the lap.

Maximum Design Pressure: -105 psf. (See General Limitation #7)



Membrane Type: Single Ply, TPO, Reinforced

Deck Type 3I: Concrete, Insulated

Deck Description: Min. 2500 psi structural concrete or concrete plank

System Type C(17): All layers of insulation simultaneously attached; membrane fully adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL Minimum 1.5" thick	N/A	N/A

Note: All layers shall be simultaneously fastened; see top layer below for fasteners and density. Insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
DensDeck Prime Minimum ½" thick	1	See Below

Membrane: UltraPly TPO membrane fully adhered to the top insulation layer with UltraPly Bonding Adhesive applied to both the substrate and the underside of the roof cover for a combined rate of 120 ft² /gal. The roof cover side and end laps are sealed with a minimum 1.5 in. heat weld.

Maximum Design Pressure: -75 psf. at a fastener density of 1:1.33 ft² (See General Limitation #7)
-105 psf. at a fastener density of 1:1 ft² (See General Limitation #7)



Membrane Type: Single Ply, TPO, Reinforced
Deck Type 3I: Concrete, Insulated
Deck Description: Min. 2500 psi structural concrete or concrete plank
System Type C(18): Membrane adhered over mechanically fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL Minimum 2" thick	1 or 8 with 7	1:1 ft²

Note: Insulation layer shall be mechanically attached with fasteners and density described. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density. See Roofing Application Standard RAS 117 for fastening details.

Membrane: UltraPly TPO XR 100 or UltraPly TPO XR 115 membrane adhered to the top insulation layer with XR Stick Membrane Adhesive applied in continuous 3/4" – 1" wide ribbons spaced 4" o.c. and allowed to expand to full coverage prior to placement of the roof membrane. The 2 in. wide roof cover side and end laps are sealed with a minimum 1.5 in. heat weld placed on the outside edge of lap.

Maximum Design Pressure: -142.5 psf. (See General Limitation #7)



Membrane Type: Single Ply, TPO, Reinforced
Deck Type 3I: Concrete, Insulated
Deck Description: Min. 2500 psi structural concrete or concrete plank
System Type C(19): All layers of insulation simultaneously attached; membrane fully adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL Minimum 1.5" thick	N/A	N/A

Note: All layers shall be simultaneously fastened; see top layer below for fasteners and density. Insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
Plywood Minimum 19/32" thick	1	1:1 ft ²

Membrane: UltraPly TPO membrane fully adhered to the top insulation layer with UltraPly Bonding Adhesive applied to both the substrate and the underside of the roof cover for a combined rate of 120 ft² /gal. The roof cover side and end laps are sealed with a minimum 1.5 in. heat weld.

Maximum Design Pressure: -150 psf. (See General Limitation #7)



Membrane Type: Single Ply, TPO, Reinforced
Deck Type 3I: Concrete, Insulated
Deck Description: Min. 2500 psi structural concrete or concrete plank
System Type C(20): All layers of insulation simultaneously attached; membrane fully adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations:

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+GL Minimum 1.5" thick	N/A	N/A

Note: All layers shall be simultaneously fastened; see top layer below for fasteners and density. Insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISOGARD HD Minimum 0.5" thick	1 & 7 or 8 & 7	1:33 ft²

Membrane: UltraPly TPO membrane fully adhered to the top insulation layer with UltraPly Bonding Adhesive roller applied at a rate of 60 ft²/gallon (120 ft²/gallon to both the underside of membrane and the substrate). The 3 in. wide roof cover side and end laps are sealed with a minimum 1.5 in. heat weld on the outside edge of the lap. Top surface of roof cover is then broomed to ensure contact.

Maximum Design Pressure: -60 psf. (See General Limitation #7)



Membrane Type: Single Ply, TPO, Reinforced

Deck Type 3I: Concrete, Insulated

Deck Description: Min. 2500 psi structural concrete or concrete plank

System Type C(21): All layers of insulation simultaneously attached; membrane fully adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations:

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISOGARD HD Composite Minimum 1” thick	1 & 7 or 8 & 7	1:1.33 ft²

Note: All layers shall be simultaneously fastened. See top layer below for fasteners and density. Insulation panels listed are minimum sizes and dimensions. If larger panels are used, the number of fasteners shall be increased using the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: UltraPly TPO membrane fully adhered to the top insulation layer with UltraPly Bonding Adhesive roller applied at a rate of 60 ft²/gallon (120 ft²/gallon to both the underside of membrane and the substrate). The 3 in. wide roof cover side and end laps are sealed with a minimum 1.5 in. heat weld on the outside edge of the lap. Top surface of roof cover is then broomed to ensure contact.

Maximum Design Pressure: -60 psf. (See General Limitation #7)



Membrane Type: Single Ply, TPO, Reinforced

Deck Type 3I: Concrete, Insulated

Deck Description: Min. 2500 psi structural concrete or concrete plank

System Type C(22): All layers of insulation simultaneously attached; membrane fully adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations:

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISOGARD HD Composite Minimum 1.5" thick	1 & 7 or 8 & 7	1:1.33 ft²

Note: All layers shall be simultaneously fastened. See top layer below for fasteners and density. Insulation panels listed are minimum sizes and dimensions. If larger panels are used, the number of fasteners shall be increased using the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: UltraPly TPO membrane fully adhered to the top insulation layer with UltraPly Bonding Adhesive roller applied at a rate of 60 ft²/gallon (120 ft²/gallon to both the underside of membrane and the substrate). The 3 in. wide roof cover side and end laps are sealed with a minimum 1.5 in. heat weld on the outside edge of the lap. Top surface of roof cover is then broomed to ensure contact.

Maximum Design Pressure: -112.5 psf. (See General Limitation #7)



Membrane Type: Single Ply, TPO, Reinforced

Deck Type 3I: Concrete, Insulated

Deck Description: Min. 2500 psi structural concrete or concrete plank

System Type C(23): All layers of insulation simultaneously attached; membrane fully adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations:

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISOGARD HD Composite Minimum 2" thick	1 & 7 or 8 & 7	1:1.33 ft²

Note: All layers shall be simultaneously fastened. See top layer below for fasteners and density. Insulation panels listed are minimum sizes and dimensions. If larger panels are used, the number of fasteners shall be increased using the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: UltraPly TPO membrane fully adhered to the top insulation layer with UltraPly Bonding Adhesive roller applied at a rate of 60 ft²/gallon (120 ft²/gallon to both the underside of membrane and the substrate). The 3 in. wide roof cover side and end laps are sealed with a minimum 1.5 in. heat weld on the outside edge of the lap. Top surface of roof cover is then broomed to ensure contact.

Maximum Design Pressure: -120 psf. (See General Limitation #7)



Membrane Type: Single Ply, TPO, Reinforced

Deck Type 3I: Concrete, Insulated

Deck Description: Min. 2500 psi structural concrete or concrete plank

System Type C(24): All layers of insulation simultaneously attached; membrane fully adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations:

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
RESISTA Minimum 2" thick	1 & 7 or 8 & 7	1:1 ft²

Note: All layers shall be simultaneously fastened. See top layer below for fasteners and density. Insulation panels listed are minimum sizes and dimensions. If larger panels are used, the number of fasteners shall be increased using the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: UltraPly TPO membrane fully adhered to the top insulation layer with UltraPly Bonding Adhesive roller applied at a rate of 60 ft²/gallon (120 ft²/gallon to both the underside of membrane and the substrate). The 3 in. wide roof cover side and end laps are sealed with a minimum 1.5 in. heat weld on the outside edge of the lap. Top surface of roof cover is then broomed to ensure contact.

Maximum Design Pressure: -150 psf. (See General Limitation #7)



Membrane Type: Single Ply, TPO, Reinforced

Deck Type 3I: Concrete, Insulated

Deck Description: Min. 2500 psi structural concrete or concrete plank

System Type C(25): All layers of insulation simultaneously attached; membrane fully adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations:

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
RESISTA Minimum 2” thick	1 & 7 or 8 & 7	1:1.6 ft²

Note: All layers shall be simultaneously fastened. See top layer below for fasteners and density. Insulation panels listed are minimum sizes and dimensions. If larger panels are used, the number of fasteners shall be increased using the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: UltraPly TPO membrane fully adhered to the top insulation layer with UltraPly Bonding Adhesive roller applied at a rate of 60 ft²/gallon (120 ft²/gallon to both the underside of membrane and the substrate). The 3 in. wide roof cover side and end laps are sealed with a minimum 1.5 in. heat weld on the outside edge of the lap. Top surface of roof cover is then broomed to ensure contact.

Maximum Design Pressure: -82.5 psf. (See General Limitation #7)



Membrane Type: Single Ply, TPO, Reinforced

Deck Type 3I: Concrete, Insulated

Deck Description: Min. 2500 psi structural concrete or concrete plank

System Type C(26): All layers of insulation simultaneously attached; membrane fully adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations:

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
RESISTA Minimum 2" thick	1 & 7 or 8 & 7	1:1.33 ft²

Note: All layers shall be simultaneously fastened. See top layer below for fasteners and density. Insulation panels listed are minimum sizes and dimensions. If larger panels are used, the number of fasteners shall be increased using the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: UltraPly TPO membrane fully adhered to the top insulation layer with UltraPly Bonding Adhesive roller applied at a rate of 60 ft²/gallon (120 ft²/gallon to both the underside of membrane and the substrate). The 3 in. wide roof cover side and end laps are sealed with a minimum 1.5 in. heat weld on the outside edge of the lap. Top surface of roof cover is then broomed to ensure contact.

Maximum Design Pressure: -105 psf. (See General Limitation #7)



Membrane Type: Single Ply, TPO, Reinforced

Deck Type 3I: Concrete, Insulated

Deck Description: Min. 2500 psi structural concrete or concrete plank

System Type C(27): All layers of insulation simultaneously attached; membrane fully adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations:

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
RESISTA Minimum 1.5" thick	1 & 7 or 8 & 7	1:1.6 ft²

Note: All layers shall be simultaneously fastened. See top layer below for fasteners and density. Insulation panels listed are minimum sizes and dimensions. If larger panels are used, the number of fasteners shall be increased using the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: UltraPly TPO membrane fully adhered to the top insulation layer with UltraPly Bonding Adhesive roller applied at a rate of 60 ft²/gallon (120 ft²/gallon to both the underside of membrane and the substrate). The 3 in. wide roof cover side and end laps are sealed with a minimum 1.5 in. heat weld on the outside edge of the lap. Top surface of roof cover is then broomed to ensure contact.

Maximum Design Pressure: -75 psf. (See General Limitation #7)



Membrane Type: Single Ply, TPO, Reinforced
Deck Type 3I: Concrete, Insulated
Deck Description: Min. 2500 psi structural concrete or concrete plank
System Type D(1): Membrane mechanically attached over preliminary fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL Minimum 1.5" thick	N/A	N/A

Note: All layers of insulation and membrane shall be simultaneously attached. See membrane below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment requirements. Insulation shall have preliminary attachment, prior to the installation of the roofing membrane.

Membrane: Mechanically attach UltraPly QuickSeam R.M.A. Strips with Heavy Duty Fasteners 6" o.c. in Coiled Metal Batten Strip centered within the 4" wide center section of the UltraPly QuickSeam R.M.A Strips in rows 10 ft. o.c. UltraPly TPO roof cover is adhered to the UltraPly QuickSeam R.M.A. Strips by first priming the underside of the roof cover, at the strip locations, with Single-Ply QuickPrime Primer and placing the primed portion of the roof cover onto the strips. Minimum 2" wide side laps are sealed with a minimum 1.5" wide heat weld.

Maximum Design Pressure: -45 psf. (See General Limitation #7)



Membrane Type: Single Ply, TPO, Reinforced

Deck Type 3I: Concrete, Insulated

Deck Description: Min. 2500 psi structural concrete or concrete plank.

System Type D(2): Membrane mechanically attached over preliminary fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
DensDeck Minimum ¼” thick	N/A	N/A
ISO 95+ GL, ISOGARD HD Minimum ½” thick	N/A	N/A

Note: All layers of insulation and membrane shall be simultaneously attached. See top layer for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment requirements. Insulation shall have preliminary attachment, prior to the installation of the roofing membrane.

Membrane: UltraPly TPO is placed over the insulation and mechanically secured to the deck with Heavy Duty Fastener and HD Seam Plates. Fastener rows are spaced at a maximum 7.5 ft. o.c. and fasteners are spaced 12” o.c. within the 6” wide roof cover side laps. The minimum 6 in. wide roof cover side laps are sealed with a minimum 1.5 in. wide heat weld on the outside edge of the lap.

Maximum Design Pressure: -45 psf. (See General Limitation #7)



Membrane Type: Single Ply, TPO, Reinforced
Deck Type 3I: Concrete, Insulated
Deck Description: Min. 2500 psi structural concrete or concrete plank
System Type D(3): Membrane mechanically attached over insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL Minimum 1.5" thick	N/A	N/A

Note: Insulation shall be loose-laid and membrane mechanically fastened. Refer to Roofing Application Standard RAS 117 for insulation attachment requirements.

Membrane: UltraPly TPO roof cover is mechanically fastened to the deck with Heavy Duty fasteners and HD seam plates spaced 6 in. o.c. within the 6 in. wide side laps. Fastener rows are spaced 142 in. o.c. The roof cover side laps are sealed with a 1.5 in. wide heat weld placed along the outside edge of the lap.

Maximum Design Pressure: -52.5 psf. (See General Limitation #7)



- Membrane Type:** Single Ply, TPO, Reinforced
- Deck Type 3I:** Concrete, Insulated
- Deck Description:** Min. 2500 psi structural concrete or concrete plank
- System Type D(4):** Membrane mechanically attached over preliminary fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL Minimum 1.5" thick	N/A	N/A

Note: All layers of insulation and membrane shall be simultaneously attached. See membrane below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment requirements. Insulation shall have preliminary attachment, prior to the installation of the roofing membrane.

- Membrane:** UltraPly TPO mechanically fastened to the deck through the insulation as described below:
- Fastening #1:** Membrane is mechanically attached using HD Plus Fasteners and HD Plus Seam Plates spaced 6" o.c. within minimum 6" wide laps. Laps are spaced at maximum 142" o.c. and sealed with a minimum 1.5" heat weld.
Maximum Design Pressure: -60 psf. (See General Limitation #7)
- Fastening #2:** Membrane is mechanically attached using HD Plus Fasteners and 1" wide Coiled Metal Batten Strip with fasteners spaced 6" o.c. along the batten bar within minimum 6" wide laps. Laps are spaced at maximum 142" o.c. and sealed with a minimum 5" wide heat weld that encapsulates the fasteners and batten strip.
Maximum Design Pressure: -60 psf. (See General Limitation #7)
- Fastening #3:** Membrane is mechanically attached using HD Plus Fasteners and HD Plus Seam Plates spaced 6" o.c. within minimum 6" wide laps. Laps are spaced at maximum 114" o.c. and sealed with a minimum 1.5" heat weld.
Maximum Design Pressure: -67.5 psf. (See General Limitation #7)
- Fastening #4:** Membrane is mechanically attached using HD Plus Fasteners and 1" wide Coiled Metal Batten Strip with fasteners spaced 6" o.c. along the batten bar within minimum 6" wide laps. Laps are spaced at maximum 114" o.c. and sealed with a minimum 5" wide heat weld that encapsulates the fasteners and batten strip.
Maximum Design Pressure: -67.5 psf. (See General Limitation #7)
- Fastening #5:** Membrane is mechanically attached using HD Fasteners and HD Seam Plates spaced 12" o.c. within minimum 6" wide laps. Laps are spaced at maximum 142" o.c. and sealed with a minimum 1.5" heat weld.
Maximum Design Pressure: -52.5 psf. (See General Limitation #7)



Fastening #6: Membrane is mechanically attached using HD Fasteners and 1” wide Coiled Metal Batten Strip with fasteners spaced 6” o.c. along the batten bar within minimum 6” wide laps. Laps are spaced at maximum 142” o.c. and sealed with a minimum 5” wide heat weld that encapsulates the fasteners and batten strip.

Maximum Design Pressure: -52.5 psf. (See General Limitation #7)

Fastening #7: Membrane is mechanically attached using HD Plus Fasteners and ¾” or 1” Polymer Batten Strips with fasteners spaced 6” o.c. along the batten bar in rows spaced 142” o.c. and along one intermediate field row centered in the field of the sheet. Side laps are sealed with a minimum 5” heat weld and the intermediate field row is covered with a minimum 5” wide strip of UltraPly TPO and sealed with a minimum 1.5” heat weld on either side of the batten.

Maximum Design Pressure: -135 psf. (See General Limitation #7)

Fastening #8: Membrane is mechanically attached using HD Fasteners and ¾” or 1” Polymer Batten Strips with fasteners spaced 6” o.c. along the batten bar within minimum 6” wide laps. Laps are spaced at maximum 68” o.c. and sealed with a minimum 5” wide heat weld that encapsulates the fasteners and batten strip.

Maximum Design Pressure: -82.5 psf. (See General Limitation #7)

Maximum Design Pressure: See Fastening Options Above



Membrane Type: Single Ply, TPO, Reinforced
Deck Type 3: Concrete, Non-Insulated
Deck Description: Min. 2500 psi structural concrete or concrete plank
System Type F(1): Membrane adhered to primed substrate

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

Barrier: None.

Membrane: UltraPly TPO XR membrane adhered to the top insulation layer with XR Stick Membrane Adhesive applied in continuous $\frac{3}{4}$ " – 1" wide ribbons spaced 12" o.c. The 2 in. wide roof cover side and end laps are sealed with a minimum 1.5 in. heat weld.

Maximum Design Pressure: -97.5 psf. (See General Limitation #9)



Membrane Type: Single Ply, TPO, Reinforced
Deck Type 3: Concrete, Non-Insulated
Deck Description: Min. 2500 psi structural concrete or concrete plank
System Type F(2): Membrane adhered to primed substrate

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

Barrier: None.

Membrane: UltraPly TPO XR membrane adhered to the top insulation layer with XR Stick Membrane Adhesive applied in continuous ¾" – 1" wide ribbons spaced 6" o.c. The 2 in. wide roof cover side and end laps are sealed with a minimum 1.5 in. heat weld.

Maximum Design Pressure: -150 psf. (See General Limitation #9)



Membrane Type: Single Ply, TPO, Reinforced
Deck Type 3: Concrete, Non-Insulated
Deck Description: Min. 2500 psi structural concrete or concrete plank
System Type F(3): Membrane adhered to primed substrate

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

Vapor Retarder: One ply of MB Base Sheet M or SBS Base fully adhered to the concrete deck with a full mopping of hot asphalt applied at a rate of 20 – 25 lbs./square.

Membrane: One ply of UltraPly TPO XR 100 or UltraPly TPO XR 115 adhered to the vapor retarder with XR Stick Membrane Adhesive applied in continuous ¾” – 1” wide ribbons spaced 4” o.c. and allowed to expand to full coverage prior to placement of the roof membrane. The 2 in. wide roof cover side and end laps are sealed with a minimum 1.5 in. heat weld placed on the outside edge of the lap.

Maximum Design Pressure: -315 psf. (See General Limitation #9)



Membrane Type: Single Ply, TPO, Reinforced
Deck Type 3: Concrete, Non-Insulated
Deck Description: Min. 2500 psi structural concrete or concrete plank
System Type F(4): Membrane adhered to substrate

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

Barrier: None.
Membrane: UltraPly TPO XR 100 or UltraPly TPO XR 115 Reinforced Membrane fully adhered with XR Bonding Adhesive XR Bonding Adhesive applied at a rate of 70-90 ft²/gallon. The roof cover laps are sealed with a minimum 1.5” heat weld.
Maximum Design Pressure: -470 psf. (See General Limitation #9)



Membrane Type: Single Ply, TPO, Reinforced
Deck Type 3: Concrete, Non-Insulated
Deck Description: Min. 2500 psi structural concrete or concrete plank
System Type F(5): Membrane adhered to primed substrate

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

Primer: Concrete deck shall be primed with ASTM D 41 asphalt primer at a rate of $\frac{3}{4}$ - 1 gal/sq. and allowed to dry prior to the application of the specified roofing membrane.

Membrane: One ply of UltraPly TPO XR 115 adhered to primed deck with hot asphalt applied at a rate of 20-25 lbs./sq. or with XR Bonding Adhesive applied at a rate of 70-90 ft²/gallon. The roof cover laps are sealed with a minimum 1.5" heat weld.

Maximum Design Pressure: -495 psf. with Hot Asphalt Applied (See General Limitation #9)
-180 psf. with XR Bonding Adhesive Applied (See General Limitation #9)



Membrane Type: Single Ply, TPO, Reinforced
Deck Type 3: Concrete, Non-Insulated
Deck Description: Min. 2500 psi structural concrete or concrete plank
System Type F(6): Membrane adhered to substrate

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

Barrier: None.
Membrane: UltraPly TPO XR 100 or UltraPly TPO XR 115 Reinforced Membrane fully adhered with Hot Asphalt with the EVT range at a rate of 20-40 lbs. per 100 sq. ft. The roof cover laps are sealed with a minimum 1.5” heat weld.
Maximum Design Pressure: -500 psf. (See General Limitation #9)



Membrane Type: Single Ply, TPO, Reinforced
Deck Type 3: Concrete, Non-Insulated
Deck Description: Min. 2500 psi structural concrete or concrete plank
System Type F(7): Membrane adhered to substrate

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

Barrier: None.

Membrane: UltraPly TPO XR 100 or UltraPly TPO XR 115 Reinforced Membrane adhered with XR Stick Membrane Adhesive applied in continuous $\frac{3}{4}$ " – 1" wide ribbons spaced 12" o.c. The roof cover laps are sealed with a minimum 1.5" heat weld.

Maximum Design Pressure: -150 psf. (See General Limitation #9)



CONCRETE DECK SYSTEM LIMITATIONS:

1. If mechanical attachment to the structural deck through the lightweight insulating concrete is proposed, a field withdrawal resistance testing shall be performed to determine equivalent or enhanced fastener patterns and density. All testing and fastening design shall be in compliance with Testing Application Standard TAS 105 and Roofing Application Standard RAS 117 and/or RAS 137, calculations shall be signed and sealed by a Florida registered Professional Engineer, Registered Architect, or Registered Roof Consultant.

GENERAL LIMITATIONS:

1. Fire classification is not part of this acceptance; refer to a current Approved Roofing Materials Directory for fire ratings of this product.
2. Insulation may be installed in multiple layers. The first layer shall be attached in compliance with Product Control Approval guidelines. All other layers shall be adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq., or mechanically attached using the fastening pattern of the top layer.
3. All standard panel sizes are acceptable for mechanical attachment. When applied in approved asphalt, panel size shall be 4' x 4' maximum.
4. An overlay and/or recovery board insulation panel is required on all applications over closed cell foam insulations when the base sheet is fully mopped. If no recovery board is used the base sheet shall be applied using spot mopping with approved asphalt, 12" diameter circles, 24" o.c.; or strip mopped 8" ribbons in three rows, one at each side lap and one down the center of the sheet allowing a continuous area of ventilation. Encircling of the strips is not acceptable. A 6" break shall be placed every 12' in each ribbon to allow cross ventilation. Asphalt application of either system shall be at a minimum rate of 12 lbs./sq.
Note: Spot attached systems shall be limited to a maximum design pressure of -45 psf.
5. Fastener spacing for insulation attachment is based on a Minimum Characteristic Force (F') value of 275 lbf., as tested in compliance with Testing Application Standard TAS 105. If the fastener value, as field-tested, are below 275 lbf. Insulation attachment shall not be acceptable.
6. Fastener spacing for mechanical attachment of anchor/base sheet or membrane attachment is based on a minimum fastener resistance value in conjunction with the maximum design value listed within a specific system. Should the fastener resistance be less than that required, as determined by the Building Official, a revised fastener spacing, prepared, signed and sealed by a Florida registered Professional Engineer, Registered Architect, or Registered Roof Consultant may be submitted. Said revised fastener spacing shall utilize the withdrawal resistance value taken from Testing Application Standards TAS 105 and calculations in compliance with Roofing Application Standard RAS 117.
7. Perimeter and corner areas shall comply with the enhanced uplift pressure requirements of these areas. Fastener densities shall be increased for both insulation and base sheet as calculated in compliance with Roofing Application Standard RAS 117 and/or RAS 137. Calculations prepared, signed and sealed by a Florida registered Professional Engineer, Registered Architect, or Registered Roof Consultant **(When this limitation is specifically referred within this NOA, General Limitation #9 will not be applicable.)**
8. All attachment and sizing of perimeter nailers, metal profile, and/or flashing termination designs shall conform to Roofing Application Standard RAS 111 and applicable wind load requirements.
9. The maximum designed pressure limitation listed shall be applicable to all roof pressure zones (i.e. field, perimeters, and corners). Neither rational analysis, nor extrapolation shall be permitted for enhanced fastening at enhanced pressure zones (i.e. perimeters, extended corners and corners). **(When this limitation is specifically referred within this NOA, General Limitation #7 will not be applicable.)**
10. All products listed herein shall have a quality assurance audit in accordance with the Florida Building Code and Rule 9N-3 of the Florida Administrative Code.

END OF THIS ACCEPTANCE



NOA No.: 15-0224.10
Expiration Date: 05/18/16
Approval Date: 10/29/15
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